A SYSTEM

OF

GEOGRAPHY,

POPULAR AND SCIENTIFIC,

OR

A PHYSICAL, POLITICAL, AND STATISTICAL ACCOUNT

OF THE

WORLD AND ITS VARIOUS DIVISIONS.

BY JAMES BELL,

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ADDRESS.

THE Publishers of the following work flatter themselves that it is one which will be found extensively valuable, both from its subject and from its execution. Geography is a branch of knowledge, which, if less adapted than most others for ambitious display, is more than most characterized by practical utility. It is less a showy accomplishment than a solid acquirement; it is not so much a thing for occasional exhibition, as a matter of every day's demand, and constantly recurring application. It may be truly said, indeed, that of all departments of secular study, this is at once the most universally and the most uniformly important for the various classes of men who are desirous of employing their lives in practical exertion, or of cultivating their minds by general knowledge.

The importance of geographical knowledge to both these classes of men, is too obvious to require much illustration. To every system of practical accomplishment, its value is direct. In every one of man's active pursuits—the greatest and the most trifling—the knowledge of the earth which he inhabits is power, and the want of it is weakness. A geographical miscalculation will more than any other ignorance involve a man in difficulties in the intercourse of ordinary life; a geographical miscalculation contributed more than all occasions else to overthrow the most extraordinary empire in the political history of man. To the lawyer, the knowledge of Geography is necessary for throwing light on the constitution of policies, and the spirit of laws; to the physician, as a basis for the arrangement of his materia, and the comparison of climates; to the divine, as a recourse for the illustration of his belief, and a guide to the application of his maxims; to the soldier, for the regulation of his movements, and

the calculation of military chances; to the sailor, at once in the choice and in the conduct of his undertakings; to the merchant, for the knowledge of his commodities, and the speculations of his traffic; to the agriculturist, for the explanation of the primary laws of his science, and for suggesting the special arrangements of his practice; to the politician, for the adequate intelligence of the statistics of his own country, the relations of foreign States, and the balance of political powers; to the man of the world, for its connexion with all that practical knowledge which is appropriate to the character of a cultivated gentleman. For, viewed as a branch of general information not less than as a necessary part of practical accomplishment, will the value of geographical science become manifest. It is not merely that Geography is itself a science, ample in extent, and rich in valuable and interesting materials: but it pervades and mingles with almost all other knowledge. Every real existence, except God, is local, and hence every event also of which we have any knowledge has its locality. The relation of place is thus one of the most constant principles of association in every science, and in every mind. And he by whom the facts of that relation are not in some degree truly understood, is destitute at once of one of the most necessary safeguards against delusion, and of one of the most important principles for the consolidation of systematic truth. *Terra incognita* has always been the favourite haunt of unlicensed fancies, and the prolific birth-place of vulgar delusions. The extension of general knowledge has always kept pace with that of geographical science. Thus, Thales, the founder of mathematical Geography, was the founder of Grecian philosophy. Thus, the discovery of America was one great element in the combination of causes, which, three centuries ago, produced the revival of genuine knowledge and the resurrection of the human mind. Thus, in these latter ages of general illumination, has it become a national object to the most enlightened people of the earth, and a fond enterprise to her most adventurous children, to lift the veil which has so long

concealed the secrets of the Southern Ocean, and those of the Frozen Pole. Geography turns our attention to objects in their own nature of the nearest interest to every reflecting mind: for what should man have a more direct curiosity to know than the form of his own dwelling-place,—the arrangements of that great theatre on which the drama of his wondrous history is acted. Geography is one of the eyes of History; deprived of that, the latter becomes a blind, erratic, unattractive form. To the philosopher, the relations of terrestrial space, the influence of local circumstances, the phenomena of various regions, the universal connexion of beings and of events with place, supply the materials of the richest, the most interesting, and most important of all his speculations. To the man of devotion, there are no resources richer than the stores of geographical information for unfolding to him the true character of man, and the constant providence of Him "who created not the world in vain," "who formed the earth and man upon it." As Cicero said of Greece, that at every step we tread upon a history, so of the whole terrestrial sphere, we may say that every glance we cast upon it rests on something worthy of being known—some admonition to the living, or some memorial of the dead—some monument of the manifold nature of man, his greatness or his degradation—some token of the all-ruling providence of God, his power, his wisdom, his goodness, or severity.

A study thus teeming with important information peculiar to itself, and thus connected with all of practical science that is known to man, is, for this very reason, at once most important to be thoroughly understood, and most difficult to be worthily expounded,—most useful to learn aright, and most arduous to teach. In one who single-handed undertakes to compile a complete and scientific system of Geography, there is required such a fund of various and accurate knowledge as falls to the lot of few, even among ripely learned men. And this is the reason why there should so long have been wanting in almost every literature, a work worthy of being so described. Since the days

of Anthony Frederic Busching, the father and founder of scientific geography, whose work was first published at Hamburg in 1754, the science has been greatly enriched by the discoveries of navigators and travellers, and the acute researches of Gaspari, Gatterer, Stein, Hassel, Ritter, Balbi, and Malte Brun, on the continent, and Rennell, Vincent, Pinkerton, and Playfair, in our own country. Of the labours of all these geographers, and especially of the immense work, first published at Weimar in 1819, from the united pens of Gaspari, Hassel, Cannabich, Guthsmutch, and Uckert, and the unrivalled volumes of Asiatic and African geography by Ritter, the publishers of the present work will freely avail themselves; and they trust that without forfeiting the character of a popular book, they will be enabled by their extensive command of every species of geographical literature, to produce, in the present publication, a work deserving the name of a scientific system of geographical knowledge.

Glasgow, 1*st May*, 1828.

UNIVERSAL GEOGRAPHY.

Divisions of the Science.] GEOGRAPHY, a name derived from two Greek words signifying a description of the earth, is the science which treats of the form and physical features of the globe. As the earth may be either considered with relation to the planetary system of which it forms a part,—or as a distinct body, possessed of peculiar features or qualities, and exhibiting peculiar phenomena,—or as the abode of rational men, who have apportioned out its surface into various artificial divisions, so there are three great divisions of the science itself: viz. Mathematical, Physical, and Political Geography. The general principles of Geography arrange themselves into these three departments, the knowledge of which ought to precede the study of particular facts.

GENERAL GEOGRAPHY.

PART I.—MATHEMATICAL GEOGRAPHY.

Various subjects which the science of geography embraces, require for their investigation the aid of mathematical reasoning. Among these subjects are the figure and magnitude of the earth,—the methods of determining the relative position of its different parts, or the latitude and longitude,—the relation of the earth to the other bodies of the universe, and particularly the mode in which it is illuminated by the sun,—the divisions which have been made of the earth's surface upon astronomical and mathematical principles,—and the different methods of representing that surface, whether by artificial globes or maps. The department of geographical science, therefore, in which these and similar subjects are treated of, has received the appellation of *Mathematical Geography.*

Almost all the different parts of mathematical geography reflect light upon each other; and it is therefore difficult to obtain such an arrangement as may enable us at once fully to discuss any one of them, while the others are not understood. Thus, before explaining the methods of determining the relative position of places upon the earth, it is proper that we should be acquainted with its figure; while, without understanding some of the appearances which the heavens present, and which it will be necessary to explain in considering the latitude and longitude, that figure cannot be exactly determined. In this department of science, therefore, it is sometimes absolutely necessary only partially to explain a subject at first, and to reserve the more complete investigation of it until other subjects have been considered.

Rotundal Figure of the Earth.] We shall begin with explaining the figure of the earth, and, for the reasons that have been stated, notice

here only some phenomena from which a general idea of that figure may be obtained.

When we take a cursory view of the appearance of the earth, it seems to be merely a vast circular plain. By a slight degree of attention, however, to such phenomena as the following, its rotundity will in a familiar manner be completely established.

Proofs.] 1*st.* If when standing upon the sea-shore, or on the banks of a river of considerable breadth, we examine the appearance which the surface of the water presents, it will be distinctly seen to be curved.

2*d.* When an object is seen at a distance upon the surface of the earth, a part of its base is hid from view. As the distance is lessened, a greater portion of the object becomes visible, and when brought sufficiently near the whole of it is seen; if, on the other hand, the distance be increased, the visible part of the body is continually diminished, and at last the object entirely disappears. Every person who has paid the slightest attention to the manner in which mountains, towers, and ships, begin to appear and disappear, must be familiar with those facts. Now were the earth a plane, bodies would simply diminish in apparent magnitude as their distance from us was increased, without any part of them being hid from view. The phenomena in question, therefore, clearly prove, that the plane in which bodies appear to be placed, is really a convex surface, which intercepts the light reflected by distant objects, and prevents it from reaching the eye of the observer.

3*d.* As we ascend a tower or a mountain, our view becomes gradually more extended. There could be no such extension of view were the earth a plane.

4*th.* When we change our position on the surface of the earth, moving south or north, a number of stars, which never were visible in the place we formerly occupied, gradually appear, while others in the opposite direction, that were constantly to be seen, are disappearing from view. Every other star in the heavens, too, appears altered in position. These appearances also evidently prove the convexity of the earth.

5*th.* All the phenomena which we have noticed, occur in apparently the same uniform degree in every part of the earth. This proves not only that the earth is a curved body, but also that it is nearly of uniform curvature, or a sphere.

6*th.* Another proof of the rotundity of the earth is derived from the many voyages which have been performed around it. Magellan and his successors, pursuing constantly a western or eastern course, have at last returned to the place from whence they set out. It is evidently impossible that they could have so returned had the earth been a plane.

7*th.* Astronomers show that eclipses of the moon are occasioned by the earth intercepting for a while the moon's light from the sun. Now the portion of the moon's disk of which the light is intercepted has always a circular form: the earth, therefore, must be of a spherical figure, for a spherical body only can in every position project a circular shadow.

It may be objected that the earth cannot be of a spherical form, as its surface presents the most irregular appearances, being in innumerable places elevated into mountains or depressed into valleys. But these irregularities when compared with the immense magnitude of the earth are very inconsiderable. The height of the highest mountain does not exceed 29,000 feet, while the diameter of the globe, as we shall afterwards see, is more than 8,000 miles.

From the obvious appearances, therefore, which have been noticed, we are entitled to conclude that the form of the earth must be at least nearly spherical. This truth being established, we shall next consider the relation of the earth to the other great bodies of the universe. After this and some other subjects have been explained, we shall resume consideration of the figure of the earth, and inquire how far it deviates from an exact sphere.

Relation of the Earth to the System of the Universe.] It belongs to astronomy to explain the motions, magnitudes, and distances of the heavenly bodies, and the physicial laws by which the movements of these bodies are carried on; but it seems to be necessary in a work which treats of the science of geography, slightly, at least, to notice the place which the earth occupies in the great system of the universe. To this subject, therefore, and the mode in which the earth is illuminated by the sun, we shall now proceed.

The Visible Horizon.] If we place ourselves on the top of a tower, or in the midst of a large plain, the heavens will seem to be a vast hemisphere supported upon the earth. The circle in which the earth and heavens appear to meet, is termed *the visible horizon.*

Motion of the Stars.] If we attentively examine the motions of the stars, they will be found to rise at different points of the horizon, to move in plains parallel to each other, and to set at points more or less distant from those at which they arose. It will also be found that they constantly preserve the same relative distances in regard to each other: always rising and setting at the same points of the horizon, and moving in the same plains, so that the starry vault appears to turn *tout d'une piece* round the earth. A revolution of the stars is accomplished in rather less than twenty-four hours. The magnitude of the circles in which the stars appear to move, gradually dminishes as we advance towards the north, and at last dwindles to a point.

Cardinal Points.] It is necessary here to remark, that the *north* and *south* points are those in which the horizon is cut by a circle perpendicular to it, and passing through the point of the heavens which remains stationary, and the place of an observer. Another circle, perpendicular to the last, and also passing through the place of an observer, will indicate by its intersections with the horizon, the *east* and *west.*

Apparent Motions of the Sun.] On attending to the motions of the sun, it will be seen that that luminary, besides its apparent diurnal motion round the earth, along with the other heavenly bodies, daily changes its position in relation to the stars in a twofold manner. First, it does not, like them, always rise and set at the same points of the horizon; but, in a gradual manner, alternately advances to and recedes from the north. In the second place, it has a motion also towards the east, for the stars which on any particular day are seen setting immediately after it, will in a few days, appear rising before it, and their rising will daily more and more precede that of the sun. After the lapse of a year, having apparently made a complete circuit among the stars, the sun will seem to have returned to its former relative position. Astronomers, in order the better to estimate this apparent motion of the sun, referred it to the groups of fixed stars, termed *constellations*, through which the sun appears necessarily to pass.

Zodiac and its Signs.] These constellations, which are twelve in number, are also denominated *signs;* and the zone of the heavens in

which they are placed, is called *the zodiac*. The names of the twelve signs or constellations of the zodiac and the characters used for representing them, are the following:—

♈ Aries	♐ Sagitarius	♍ Virgo
♊ Gemini	♒ Aquarius	♏ Scorpio
♌ Leo	♉ Taurus	♑ Capricornus
♎ Libra	♋ Cancer	♓ Pisces.

Hypothesis of the Ancients.] The motions of the sun, and the still more irregular movements of a few stars termed *planets*, greatly perplexed the ancient astronomers, almost all of whom maintained that the earth was the centre of the universe, and immovable. Some philosophers, even among the ancients, however, particularly Pythagoras and his followers, seem to have been acquainted with the true motions of the earth. Their opinions on the subject, after lying hid for ages, were revived in the 16th century by Copernicus, and form the basis of the modern astronomy. Upon this foundation, that science, by the genius of Kepler, Newton, and many others, has been brought to a very high degree of perfection. It has been established by these philosophers, that the true system of the universe is the following:—

Real Motion of the Earth.] The earth moves round every day upon an axis, and revolves round the sun, from west to east, in the course of a year. The orbit in which it moves is an ellipse, and has the sun placed in one of the foci. The other planets and the comets also revolve around the sun in elliptical orbits. Some of the planets are attended in their course by satellites, or moons, performing revolutions around them. All the other heavenly bodies, termed *fixed stars*, are placed at inconceivably greater distances from the earth than any of the planets, and are supposed to be similar to our sun, being each the centre of a system.

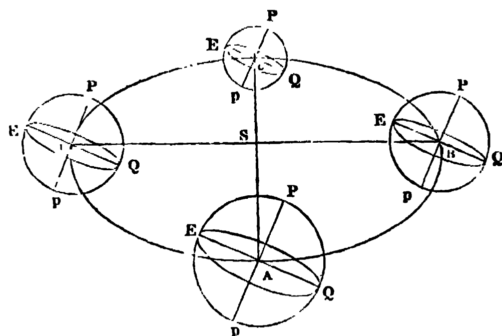
The rotatory motion of the earth is the cause of the apparent diurnal motion of the heavenly bodies around it; the motion of the earth round the sun from west to east, produces the apparent annual revolution of the sun among the stars in the same direction; the motion of the sun towards the north and south alternately, is produced also by the earth's annual revolution, and the inclination of the earth's axis to the plane of its orbit,—the axis continuing parallel to itself, or nearly so, during the whole revolution. As this last motion, however, is the cause of the seasons, and of the change in the length of the days and nights at different periods of the year, it will require a fuller elucidation. We must first give a few definitions.

The Poles, Equator, Ecliptic, and Meridians.] The extremities of the earth's axis are termed *poles* of the earth, and the centre of that axis, is the centre of the earth, and also of the celestial sphere. The axis produced to the sphere of the fixed stars, forms the axis of the celestial sphere, and the points where it meets that sphere, are *the celestial poles*. The great circle of the celestial sphere, which is perpendicular to the axis, is *the celestial equator*, and its intersection with the surface of the earth, *the terrestrial equator*. Great circles of the celestial sphere at right angles to the equator, and which must consequently pass through the celestial poles, are termed *circles of declination*, or *celestial meridians*. The intersections of these circles and the earth, are termed *terrestrial meridians*. The terrestrial meridians must evidently

passes through the poles of the earth. Sometimes a semicircle only is termed the meridian, and the opposite semicircle is then called the opposite meridian. The distance of a star from the equator, measured upon a circle of declination passing through it, is termed *the declination* of that star; the orbit in which the earth moves round the sun, is called *the ecliptic;* the inclination of the planes of the equator and ecliptic, is termed *the obliquity of the ecliptic*—the obliquity must evidently be equal to the complement of the inclination of the axis and ecliptic. Some of the above definitions are not required for our present purpose, but they will be necessary afterwards, and we give them here for the sake of connexion.

Effects of the different positions of the Earth.] The effect which the inclination of the axis must have upon the declination of the sun, may be illustrated by first supposing the axis to be parallel, and then conceiving it to be perpendicular, and observing what the result in these extreme cases would be. In the annexed figure, S represents the sun, the lines P p which are parallel to each other, the axis, E Q the equator, and A B C D the ecliptic. If P p were perpendicular to, and E Q parallel with the ecliptic, it is evident that the sun would never have any declination; for, in whatever part of its orbit the earth might be, a line joining the centres of the earth and sun would always be in the plane of the equator. If, on the contrary, P p were parallel, and EQ consequently at right angles to the ecliptic, the sun would have all possible degrees of declination. At some point A, the declination would be nothing, and the sun appear to move in the equator. In going from A to B the declination would continually increase; and at B, P p would evidently coincide with the line joining the sun and the centre of the earth, so that the declination would then be ninety degrees, and the sun appear to be placed in the pole p. From B to C the declination must diminish, and at C the sun would again appear to move in the equator. From C to D the declination must again increase, and at D, the sun would be in the opposite pole P. When the earth arrived at A, the sun would again appear to have returned to the equator. But the axis of the earth is neither perpendicular to, nor parallel with the plane of the orbit, but inclined to it in a certain degree. This must occasion the declination to vary in the same manner as a parallel axis would do, but to a less extent. At two opposite points, A and C, the sun will be in the equator. The declination will be greatest at B and D, and will there be equal to the obliquity of the ecliptic: for, at each of these points, a line joining the centres of the earth and sun, will form with the plane of the equator, an angle equal to the inclination of the equator and ecliptic. The declination at B and D, however, will be on opposite sides of the equator.

Fig. 1.

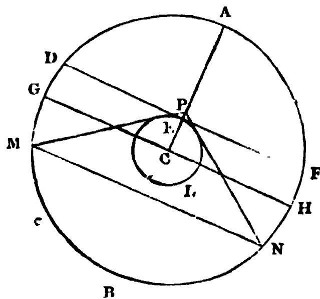


The Equinox, Solstices, and Tropics.] The seasons in which the sun moves in the equator, are termed *equinoxes*, and that circle is called *the equinoctial;* because, when he moves in it, the day and night—for a reason that will be afterwards seen—are equal over the whole earth. The seasons at which the sun's declination is greatest, are termed *solstices;* because his declination appears then to remain stationary for a while. The circles in which he then moves are denominated *tropics*, or *circles of return.* The tropics pass through the constellations of the crab and goat, and are therefore called the tropics of *cancer* and *capricorn.* The tropic of cancer is situated on the north of the equator, and that of capricorn to the south.

Before showing how the greatest declination of the sun may be found, it is necessary to give some explanations regarding the altitude of heavenly bodies and the horizon.

The Visible and Rational Horizon.] We have already said that the circle in which the heavens appear to meet the earth, is termed the visible horizon. The plane of that circle must evidently be a tangent to the earth at the point where the observer is situated, if he be not placed in an elevated position. A great circle of the celestial sphere parallel to the visible horizon, is termed *the rational horizon.* From the distance of the fixed stars, by which the magnitude of the celestial sphere is determined, being almost infinite in comparison of the distance of any point on the surface of the earth from the centre, the visible and rational horizons must coincide. Thus, in the annexed figure, suppose A B and E L to be two concentric spheres representing the earth and the heavens, and D F and G H to be the visible and rational horizon. If the radius C E be but a point in comparison of C A, D F and G H must coincide. The visible and rational horizons, however, will coincide only when the plane of the former is a tangent to the earth. If the observer be placed in an elevated position, as upon the top of a tower, or a mountain, his view of the heavens will be extended, and its boundary the visible horizon, will be depressed below the rational; thus, in the above figure, let P be the elevated position of the observer, and P M P N tangents drawn from that point to the earth, and produced to the heavens. The intersections of these tangents with the celestial sphere, mark out M N to be the position of the visible horizon. When we speak of the horizon simply, the rational horizon is always meant.

Fig. 2.

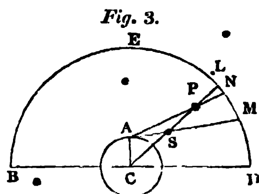


The Zenith and Nadir.] The point in which a line drawn through any plane perpendicular to the horizon meets the celestial sphere above us, is termed the *zenith* of that place, and the point in which the same line meets the heavens in the opposite direction, the *nadir* of the place. The direction of gravity being always perpendicular to the horizon, the zenith must be directly over our heads, while the nadir will be under our feet. Since the earth is not exactly spherical, the line joining the zenith and nadir of any place will not pass through the centre of the earth. Great circles perpendicular to the horizon are termed

verticals. The altitude of a star above the horizon, is equal to the arc of a vertical passing through the star, intercepted by it and the horizon.

True and Apparent Place of a Star.] Unless the distance of a body be very great, its altitude will appear to be different to two observers placed one on the surface, and the other at the centre of the earth; thus, in Fig. 3, suppose A C the earth, B D the rational horizon of an observer at A, and B E D the sphere of the heavens. The star S will appear at A to be situated at M, while, to an observer at C, it will seem to be at L. The difference in these elevations will be the arc M L. The greater the distance of the star is, the less will the difference in these altitudes be. Thus, if the star be at P, the difference in the elevation will be only the arc N L, which is less than M L. The distance of the fixed stars being so indefinitely great, compared with the semidiameter of the earth, that the visible and rational horizons coincide, their elevation must appear the same whether seen from the surface of the earth or the centre. It is otherwise, however, with the sun and planets. Their distance bearing a sensible proportion to the radius of the earth, will appear a little more elevated as seen from the centre, than at the surface. The difference between the altitude of a body as seen from the centre and surface of the earth, is termed its *parallax.* The parallax will evidently be greatest when the body is in the horizon, and least when in the meridian. The horizontal parallax of the sun has been found to be about 8″ 6, while that of the moon varies from about 54′ to 62′, her distance from the earth not being always the same. To render all observations capable of comparison, astronomers always make allowance for the parallax, and consider the altitude of a body as it would be seen from the centre. The point of the celestial sphere to which the body is referred when so seen, is termed its *true place*, while the point to which it is referred when seen from the surface, is called its *apparent place.*

Fig. 3.



Sun's Declination.] We return now to consider the method of finding the greatest declination of the sun. This is done by observing at the same place the altitudes of the sun when it passes the meridian, at the summer and winter solstices. Half the difference between the altitudes will evidently be equal to the greatest declination. This declination, which must be equal to the obliquity of the ecliptic, is found at present to be about 23° 28′. But ancient observations, as well as the calculations of the forces by which the motions of the planets are produced, show that the obliquity is not invariable. It diminishes at the rate of 50″ in a century, till it reach a certain limit, after arriving at which it must begin again to increase.

Variation in the length of the Days and Nights.} The change in the declination of the sun is the cause of the variation in the length of the days and nights. It will be necessary in illustrating this subject, and explaining the appearances which the sun must present in different latitudes, to consider how the celestial sphere will appear to observers differently situated in regard to the earth's axis. The horizon of a person on the terrestrial equator being parallel to the axis, the planes of the circles in which the stars appear to move will be perpendicular to the horizon, and will be divided by it into two equal parts, since the horizon is a great circle. All the heavenly bodies, therefore, whatever their declination

may be, will, at the equator, be visible during half their course. The poles will be in the horizon, and the celestial equator directly over the observer's head. The inhabitants of the earth at the equator, are said to live in a right sphere. The horizon of a person placed on either of the terrestrial poles being, on the contrary, perpendicular to the axis, the planes of the circles in which the stars move will be parallel to the horizon, and that circle will therefore constantly divide the heavens into the same two hemispheres. All the heavenly bodies which are in one of these hemispheres will be constantly to be seen, while those in the other will never be visible. One of the celestial poles will be in the zenith of the observer, and the equator will coincide with the horizon. The inhabitants at the poles, if there be any such, are said to live in a parallel sphere. At all intermediate parts of the earth, the horizon being placed more or less obliquely to the axis, the heavenly bodies will appear to move in circles, the planes of which are more or less inclined to the horizon; and the parts into which the circles are divided by it, must become more unequal as we recede from the equator. The time during which the heavenly bodies continue visible, therefore, will vary as their distance from the equator is augmented; and around one of the poles a number of stars will be seen during the whole period of their revolution, while an equal portion of the heavens at the other pole will be always invisible. The pole and the equator will be more or less elevated above the horizon. The inhabitants of the earth between the equator and the poles are said to live in an oblique sphere.

We are now prepared to explain the change which takes place in the length of the days and nights, and the different appearances which the sun must present to the inhabitants in different latitudes. To the inhabitants at the equator, the sun will be vertical at the equinoxes, and his least meridian altitude is at the solstices, when it will be 66° 32′, which is more than his greatest altitude is with us. At all places within the tropics the sun must be vertical twice in the year, and when in the meridian, he will be seen sometimes to the north, and sometimes to the south. At the tropics the sun is vertical only once in the year, when in the solstice corresponding to that tropic; and at the opposite solstice his meridian altitude is only 43° 4′. No place without the tropics can ever have a vertical sun, and in all such places he will be always seen in the same direction. At the equator the length of the day—apart from refraction, of which we shall not at present take any notice—must be always twelve hours; and when the sun moves in the equinoctial, the day and night must also be equal over the whole earth. As the declination of the sun increases, however, the day and night at all places which are not under the equator, must become more and more unequal. The day will be longer than the night in that hemisphere which is on the same side with the sun, and shorter in the other, and the difference must increase with the latitude. The day at any place will be longest when the sun is in the tropic next that place, and shortest when in the other. At the poles the sun will be visible during half a year at a time, and invisible during the other half. At either pole he will annually appear to describe a spiral of which each coil is nearly horizontal, half of the spiral being above the horizon and half below. The declination of the sun changing fastest at the equinoxes, and slowest at the solstices, the coils will be much more open in the middle than near the ends. Around the pole which is nearest to the sun, a portion of the earth, corresponding in

number of degrees to the declination, will be constantly illuminated, while a similar portion around the other pole will be always in darkness. At the tropics, therefore, the portions of the earth which have a day or night of twenty-four hours, will extend to 23° 28′. The circles which bound these portions of the earth are termed *polar circles*, and also *the arctic*, and *antarctic* circles, that to the north being the arctic.

The Seasons.] The change in the declination of the sun not only occasions a variation in the length of the days and nights, but is also the cause of the difference in the heat at different times of the year. The quantity of solar rays which fall upon any part of the surface of the earth will be greater the less their degree of obliquity be: for as the obliquity is increased, the same number of rays must be spread over a wider surface, and a change in the declination must evidently alter the angle at which the rays impinge upon any part of the earth. The difference too in the time which the sun continues above the horizon, must also occasion a variation in the temperature: for the longer the sun shines upon any place a larger portion of heat will be accumulated.

The equinoxes and solstices divide the year into four seasons. From the vernal equinox to the summer solstice is with us the astronomical spring. From the summer solstice to the autumnal equinox is our summer. The time betwixt the autumnal equinox and the winter solstice is our autumn; and from the winter solstice to the vernal equinox is our winter. In the southern hemisphere the seasons are reversed: it being spring with them when autumn with us, and their summer corresponding to our winter. The orbit of the earth being an ellipse, in one of the foci of which the sun is situated, and the earth during our summer being in that part of her orbit which is farthest from the sun, the latter body will, from the nature of the physical laws which regulate the movements of the planets, employ a longer time in passing through that season than our winter. This occasions the summer in the northern hemisphere to be about eight days longer than that which the inhabitants of the southern hemisphere enjoy.

Zones or Climates.] The ancients divided the earth into different zones, which they termed *climates*, by means of the length of the longest day increasing as we recede from the equator. This mode of dividing the earth is not now much in use, but in perusing the works of ancient authors upon history and geography, it is proper that we should be acquainted with it. A climate, according to the ancients, is a portion of the earth's surface bounded by two parallels so far distant from each other that the longest day at the one differs half-an-hour from the longest day at the other. Almost all the places known to the ancients were comprehended in seven such climates, the southern boundary of the first climate being that parallel in which the longest day is twelve hours and three quarters. The climates were denominated from some remarkable place situated about the middle of them. Their names, beginning with the most southern, were Meroe, Syene, Alexandria, Rhodes, Rome, the Borysthenes, and the Riphean Mountains. The ancients expressed the position of places, simply by saying they were in such a particular climate. When the moderns divide the earth into climates, they begin at the equator, and reckon by the difference of half-an-hour, in the length of the longest day till we reach the polar circles; after that they are counted by the increase of a month, in the time during which there is constant day. The climates between the equator and polar

circles are termed ***hour climates***, and those beyond these circles, ***month climates***.

The tropics and polar circles divide the earth into five zones; that part of the earth which lies between the tropics, receiving constantly the solar rays in a direction very little oblique, is called the *torrid zone*. The parts which lie between the tropics and polar circles, receiving the sun's rays more obliquely, are called *temperate zones;* and the regions within the polar circles, being deprived of the sun's rays during a great part of the year, and during the other part receiving these rays very obliquely are termed the *frigid zones*. Some geographers make the zones to be six in number, by dividing the torrid zone into two parts by the equator.

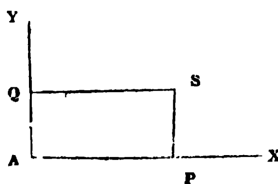
Ascii, Amphiscii, Heteroscii, and Periscii.] The inhabitants of the different regions of the earth are sometimes distinguished by the ancient geographers, according to the direction of their shadows. When the sun at mid-day is vertical to any place, the inhabitants of that place were said to be *ascii*, that is, without shadow. All the inhabitants between the tropics must be ascii twice a year. The inhabitants of the torrid zone too, having the sun sometimes to the north, and sometimes to the south, will project shadows directed by turns towards either pole, and they were therefore said to be *amphiscii*, that is having both kinds of shadows. Those who inhabit the temperate zones were called *heteroscii*, because their shadows fall in opposite directions. Within the polar circles the inhabitants must, for a while, project shadows in all directions, and they are therefore said to be *periscii*.

Periœci, and Antiœci.] The seasons which the inhabitants of opposite places on the earth enjoy at the same time, as well as the hours of the day at these places, being contrasted, give rise to certain distinctions with which it is also necessary to be acquainted. Those who live under opposite meridians, at equal distances from the equator, and upon the same side of it, are termed *periœci*. They have the same seasons, but reckon at the same instant opposite hours: it being midnight with the one when mid-day with the other. Those who live under the same meridian on opposite sides of the equator, and at equal distances from it, are called *antiœci*. They have the seasons at opposite times, but reckon at the same instant the same hours. The people who live at equal distances from the equator, and under opposite meridians, are termed *antechthones*, or *antipodes*. They have both the seasons and the hours of the day at opposite times.

Latitude and Longitude.] We shall next explain the methods of determining the relative position of the different parts of the earth's surface.

The position of an object being, of course, entirely a matter of relation, the first thing to be done in finding the place of any body, is to fix upon some known points or lines in reference to which the position may be determined. The simplest way of determining the position of points situated upon a plane, is by ascertaining their distance from two lines drawn on the same plane, and intersecting each other at right angles. Thus, let S be a given point, and A X, A Y, two lines drawn on the plane on which S is situated, and intersecting each other at right angles in A. Draw S Q parallel to A X, and S P parallel to A Y. It is evident, that if the magnitude of S P

Fig. 4.



and S Q be ascertained, the position of S is known. Points situated upon the surface of a sphere, may, in a similar manner, be referred to two great circles of the sphere drawn at right angles to each other. For, suppose in the above figure, the lines of reference A X and A Y to be great circles of a sphere, then S P and S Q will be arcs of parallel small circles, and the situation of S will be known if the length of those curve lines be ascertained. Even without determining the absolute magnitude of S P and S Q, the relative position of S will be found by merely ascertaining the number of degrees contained in them, or in the similar arcs A P and A Q. It is in this latter way that the relative position of the different parts of the earth's surface is determined. Two great circles of the celestial sphere are made choice of, and the position of any place is found by ascertaining the distance of its zenith from these circles. The arcs upon the earth corresponding to the celestial arcs, not being exactly circular, cannot be proportional to them, as we shall afterwards see.

With regard to the circles of reference made choice of, all geographers have agreed in adopting the equator, or that great circle which is perpendicular to the earth's axis, as one of the two. The motion of the earth, however, does not point out any of the meridians as more particularly fit to be made choice of than another: and one of them, therefore, must be adopted upon arbitrary principles. The ancients made choice for their first meridian of that one which passes through the Fortunate or Canary Isles, because these islands were at the most western limit of the then known earth. Various others have been successively adopted; but in almost all countries, that meridian which passes through the principal observatory of the kingdom is now employed. Thus the English count from the meridian of the observatory of Greenwich, and the French from that of the observatory of Paris. The reason of this is, that tables of astronomical observations are of essential use in finding the longitude, as we shall soon see; and the position of the heavenly bodies at any given time, is most conveniently referred to the meridian of the place where the observations are made.

The distance of a place from the equator is termed *latitude,* and its distance from the first meridian *longitude.* The terms latitude and longitude had their origin from the earth, as known to the ancients, being of much greater extent in the direction of the equator, than in that of the meridian. The latitude and longitude must be expressed in such manner that it may be known on which side of the equator and first meridian the place is situated. This is easily accomplished. The latitude is called *north* or *south,* according as the place lies to the north or south of the equator. It is counted from the equator towards the poles, and can never exceed 90 degrees. The longitude is expressed in two different ways. Beginning at the first meridian and proceeding eastward, it may be reckoned, in the same direction, completely round the globe, and may in that way extend to 360 degrees. The other method is to divide it into *east* and *west* longitude, in which case it can never exceed 180 degrees. The mode of converting the longitude expressed in one of those ways into an expression of similar import in the other, is sufficiently obvious, and scarcely requires to be noticed. We shall merely give a few examples. Long. 143° 10′ 55″=East long. 143° 10′ 55″. Long. 236° 25′ 35″=West long. 123° 34′ 25″, and West long. 14° 44′ 10″=Long. 345° 15′ 50″.

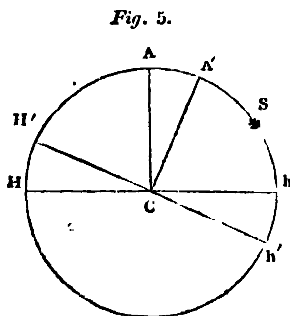
Method of Reducing the Longitude to any Given Meridian. Different first meridians being employed in different countries, it is often necessary to reduce the longitude estimated in reference to one meridian to that of another. This may be easily done if we know the difference of longitude between the two meridians, and the direction in which it lies, whether east or west: for we have only to add or subtract the difference. To illustrate this, we shall, as in the former case, merely give one or two examples. The meridian of Paris is 2° 20′ 15″ east from the meridian of Greenwich. A place, therefore, in 59° 7′ long. from Paris, will be 61° 27′ 15″ from Greenwich. If, in 359° 15′, it will be in 1° 35′ 15″ of Greenwich longitude.

If the earth were exactly spherical, the degrees of latitude upon its surface, being parts of a great circle, would be all equal to each other. The degrees of longitude, however, would continually diminish as we recede from the equator, and at the pole they would converge to a point. The magnitude of a degree of longitude in any latitude would be easily found, for the radius of the parallel on which it is measured would be equal to the cosine of the latitude, and the circumferences of circles are to one another as their radii. A degree of longitude, therefore, would be equal to a degree on the equator, multiplied by the cosine of the latitude, if the radius of the sphere be reckoned unity. The earth being almost exactly spherical, the degrees of latitude upon its surface will be very nearly equal, and those of longitude will diminish in much the same manner as in an exact sphere. Tables of the degrees of longitude, therefore, on the earth may be found with sufficient accuracy from the above formula. We shall afterwards have an opportunity, when considering the magnitude and figure of the earth, of inquiring how much the degrees of latitude increase as we approach the poles.

Having discussed these preliminary matters, we shall now explain the different methods for ascertaining the latitude and longitude that have hitherto been discovered. In doing so, however, we shall content ourselves with pointing out the general principles upon which those methods depend, leaving the subject to be more fully discussed by those who treat of navigation and astronomy. We begin with the latitude.

Method of finding the Latitude. The ascertaining both of the latitude and longitude we have seen is equivalent to the measurement of celestial arcs. The arcs, which it is necessary to determine in order to find the latitude of any place, is that intercepted by the equator and the zenith. This arc cannot be directly measured, the position of the equator not being marked out in the heavens. It may be found, however, from the following considerations:—The change which takes place on the altitude of the stars when an observer removes from one part of the earth to another, north or south, is equal to the variation in the latitude; thus, let A H h be a meridian, A A′ two positions of an observer, and H h, H′ h′ the corresponding horizons. Draw A C and A′ C perpendicular to H h and H′ h′ respectively. These lines will not really meet at the centre of the earth, though so drawn in the figure, but this will not affect the reasoning. When

Fig. 5.



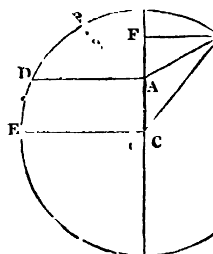
the observer has arrived at A′, the star S will appear more elevated than at A by the arc h h′. But that arc is equal to the arc A A′. For the arcs A H and A′ h′ are equal, each of them being a quadrant. Take away the common arc A′ h, and there remains A A′ equal to h h′. The difference in the latitude of any two places, therefore, may be ascertained by finding the difference in the meridian altitudes of any star at these places. But farther, since, to a person on the terrestrial equator, the poles must be situated in the horizon, and the celestial equator directly over his head, the elevation of the pole above the horizon must be equal to the latitude, and the meridian height of any point of the equator above the horizon must be equal to its complement. Again, the inclination of the planes in which the stars move must be equal to the complement of the latitude. For, in the above figure, suppose A C to be the equator To an observer at A′, the inclination of the planes of the equator and horizon is measured by the arc A H′, the lines A C and H′ C being drawn in these planes, and at right angles to their common intersection. But that arc being the height of the equator, is equal to the complement of the latitude, and since all the planes in which the stars move are parallel to each other, the truth of our proposition is manifest. The latitude of any place, therefore may be discovered by finding at that place, the elevation of the pole,—the height of the equator,—the altitude of any star whose distance from the pole, or from the equator is known,—or the inclination of the planes in which the stars move with the horizon. We shall now show how these different problems may be determined.

The stars which never set furnish us with the means of ascertaining the height of the pole. These stars describe circles around it, and must pass the meridian twice a day. By ascertaining the altitude of any one of them when it passes the meridian above and below, the elevation of the pole will be ascertained, for it must evidently be equal to the arithmetical mean between the two altitudes. The height of the equator may be ascertained in the following manner:—Find all those stars which are 90 degrees distant from the pole. Those stars will be in the equator, and by finding the altitude of any one of them when it passes the meridian, the equatorial height will be determined. Tables of the declination of the stars, or their distance from the equator have been formed, which enable us to determine the latitude from the ascertained altitude of any star, for the complement of the latitude will be equal to the sum or difference of the meridian height and declination, according as the star is situated to the south or the north of the equator. The declination of the sun, is, from the causes formerly explained, constantly varying, and allowance must be made for this, in deducing the latitude from the height of the sun. The laws of the variations in the sun's declination being known, tables of the daily changes in that declination have been formed, which enable us to find the latitude from the meridian altitude of the sun at the given place, on a particular day being known, as accurately as if the declination of that luminary continued always invariable. This last method is a very common mode of determining the problem.

The inclination of the planes in which the stars move with the plane of the horizon, may be found by ascertaining the distance of any star from the southern point of the horizon when it rises, which is termed the azimuth of the star, and by also finding its meridian altitude. This we shall now show. The investigation requires only a slight acquaint-

ance with plane trigonometry, and the arithmetic of sines. Let S E N represent the eastern half of the plane of the horizon, S being the south, N the north, and E the east points. Conceive the semicircle S B N to be the meridian of the observer at C, and consequently to be placed at right angles to the other semicircle. Let D be the point of the horizon in which a star rises, and P its position when in the meridian. Let D A be the intersection of the plane in which the star moves, with the eastern half of the plane of the horizon. Draw P A and P C, and let fall the perpendicular P F. The angle P A S will evidently be equal to the inclination of the plane in which the star moves with the plane of the horizon. Now tan. P A S $= \frac{PF}{AF} = \frac{\text{sin. } PS}{CF - CA} =$

Fig. 6.



$$\frac{\text{sin. } SCP}{\text{cos. } FCP - \text{sin. } ED} = \frac{\text{sin. } SCP}{\text{cos. } SCP - \text{cos. } DS} = \frac{\text{sin. } SCP}{1 - \frac{\text{cos. } DS}{\text{cos. } SCP}};$$

Let h denote the meridian height, and z the azimuth. Then tan. P A S $= \frac{\text{sin. } h}{1 - \frac{\text{cos. } z}{\text{cos. } h}}$. From this formula, involving only the azimuth and meridian height, the inclination of the planes, which is equal to the complement of the latitude, may be found.

Method of finding the Longitude.] Having thus shortly explained the general principles of the different methods employed in finding the latitude, we shall next turn our attention to the longitude. The longitudinal arc is equal in number of degrees to any of the arcs intercepted upon the equator and its parallels, by the first meridian and the meridian which passes through the given place. By determining any one of these different arcs, therefore, the longitude will be found. The only way in which the length of these arcs can be found, is by observing the time which the heavenly bodies occupy in describing them. If the motion be uniform, the longitudinal arc will evidently have the same proportion to a complete circle, or 360 degrees, that the time occupied by the body in describing it bears to the period of a complete revolution. The determination of the longitude thus involving the consideration of time, we must here explain the unit of time which has been adopted by astronomers.

The time in which a revolution of the fixed stars is accomplished, is termed a *siderial day.* This time is absolutely invariable: no irregularity ever having been discovered in the motion of the starry sphere. The siderial day, therefore, must be the most accurate unit of time that can be imagined. It has not, however, been adopted in practice, as it is found to be more convenient to estimate time in reference to the period which elapses from the sun's departure from the meridian, to his arrival at the same meridian again. This portion of time is not invariable. The time employed by the earth in revolving so as to bring the same meridian to point again towards the sun, will evidently be greater than

the time of a complete revolution upon the axis. It will be increased by the earth's motion in its orbit. But that motion is not uniform; and, therefore, as well as from the obliquity of the ecliptic, a solar day cannot be an invariable portion of time. The mean length of all the days in a year, however, will be an invariable period, and has accordingly been adopted by astronomers as the measuring unit. It is divided into twenty-four parts termed hours, and each of these parts is divided into sixty minutes, subdivided into sixty seconds, and so on. Astronomers in all their calculations make use of this time, which is termed *mean*, or astronomical time. The time estimated in reference to the moment of the sun's passage over the meridian on any particular day, is termed *true time*. That we may be able to deduce the *mean* time from the *true*, tables of differences have been formed. These differences never exceed sixteen minutes, and must, at some seasons, be added to, and at others subtracted from the true time. This correction is termed the equation of time. The length of the siderial, when compared with that of the mean solar day, is 23h 56′ 4″. We may here also remark, that if the equator be divided into twenty-four equal parts, twelve meridians passing through the points of division are termed *hour circles*.

The time at any place may be found from an observation of the sun when in the meridian. It may also be discovered from an observation of a star. To explain how this is done, we must premise that the arc of the equator, intercepted by the point of the vernal equinox, and a circle of declination passing through a star, is termed the *ascension* of that star. Tables have been formed of the right ascension of the sun on the different days of the year. By observing, therefore, the hour at which any star passes the meridian, and converting the difference between the right ascension of the sun and star into time, the hour of the day will evidently be found.

One very obvious mode of measuring the time that the sun occupies in passing from one given meridian to another, is furnished by the use of chronometers. If a chronometer, set to the time at any given meridian, be carried to a place of which the longitude is different, the difference betwixt the time indicated by the chronometer and that of the place to which it has been carried, will evidently be equal to the period which the sun occupies in passing over the arc that lies betwixt the meridians of the two given places. This is a very simple way of determining the problem; and is the method in which the longitude is most commonly found. But chronometers have not yet been formed so as to mark the lapse of time with perfect accuracy: though their construction be now brought to a wonderful degree of perfection. Besides, they are liable to be deranged by accidents, without that derangement being discovered. For these reasons, the determination of the longitude by the chronometer is not to be altogether depended on.

All other methods of determining the longitude are founded upon this principle. If a phenomenon be seen at the same instant at two distant places, the difference in the hours of the day at those places when the phenomenon is observed, will be equal to the time occupied by the sun in describing the longitudinal arc that lies betwixt them. The phenomena most generally employed formerly in determining the longitude upon this principle, were eclipses of the moon. The parallax of the sun being very small, the beginning and ending of an eclipse, as well as the entering of any spot upon the moon into the earth's shadow, or its emerging

from it, will be seen at the same instant wherever the eclipse is visible. But the defect of these phenomena is, that the exact moment when any of them happens cannot be exactly ascertained, it being impossible to distinguish the penumbra from the true shadow. Besides, eclipses of the moon happen but rarely, and could therefore be of very little use in determining the longitude at sea. Eclipses of Jupiter's satellites, which happen frequently, have been employed instead of eclipses of the moon; but, in them also, it has been found impossible to observe with accuracy the precise moment of immersion, or emersion. Eclipses of the sun have also sometimes been made use of. In them the beginning and end of the eclipse will not be seen in distant places at the same instant: for the parallax of the moon being considerable, she will be referred by observers differently situated, to different parts of the heavens. In deducing the longitude, therefore, from solar eclipses, allowance must be made for parallax. It has been found that the longitude cannot be very exactly determined by solar eclipses; and besides, they occur but seldom.

Another class of phenomena employed for determining the longitude, are occultations of the stars and planets by the moon. The moon being nearer to us than any other of the heavenly bodies, she may come betwixt the earth and any of the stars which are placed near to her orbit. This is termed an *occultation* of the star. Such phenomena are frequently occurring, and the time when the centre of the moon is in conjunction with the star—especially in occultations of the fixed stars—may be observed with considerable exactness.

The most common way of determining the longitude now, however, is by what are termed *lunar distances*. The fixed stars constantly preserve the same relative distances in respect of each other. The distances of the sun, moon, and planets, however, from the fixed stars and from one another, are constantly varying. Any particular angular distance of one of them from some other body in the heavens, therefore, is a phenomenon by observing which, at different places, the longitude may be found. It is evident, however, that unless the relative distances change with considerable rapidity, the longitude cannot in this way be found with accuracy: for, if the change were at a slow rate, the same distance would be common to some portion of time. The angular distance of the moon alone changes with sufficient rapidity. The motion in her orbit being at the rate of 13° a day, her position must vary about a minute of a degree every two minutes of time. With the aid, therefore, of the delicate instruments which we now possess, the longitude may be very accurately determined, by observing in two places at the same instant, the angular distance of the moon from a star, or from the sun.

In finding the longitude by the methods before noticed, it is not necessary that corresponding observations should be made in different places at the same time. Astronomical almanacks—such as the Nautical Almanack, or Astronomical Ephemeris, published in England by order of the Commissioners of Longitude, or the *Connaisance des Tems* of the French—give the results of the calculations of eclipses made beforehand for a place of which the longitude is known. They also contain the angular distances of the moon from the sun, and from several of the most remarkable stars at the same known place, on every day of the year, and even at different hours of the same day.

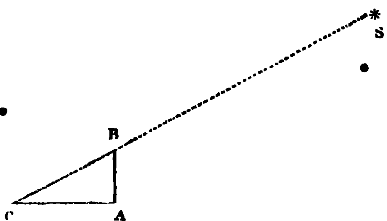
It has sometimes been proposed to find the difference between the longitude of two places by means of signals made by gunpowder. In a

calm night, a quantity of gunpowder might be from time to time inflamed on an elevated place in the open air. The difference between the hour in two places at which the flashes were observed, would be proportional to the longitude. The defect of this method is, that such signals cannot be observed but at places whose distance is comparatively inconsiderable. The longitude of such places, however, may in this way be accurately determined.

Method of Determining the Position of the Meridian. It is necessary that the position of the meridian should be known, before many of the celestial observations required for determining the latitude and longitude, and other problems in Mathematical geography can be made. We shall, therefore, here show how it may be found. It is evident that a line drawn from the place of an observer to the pole will be in the plane of the meridian. Had any star, therefore, been placed exactly in the pole, we would have been furnished with a very simple method of obtaining a meridian line. No star, however, is situated exactly in that point of the heavens: but one, termed the pole star, is placed near to it, and enables us to find the direction of the meridian with a considerable degree of accuracy. The meridian may be found exactly, by observing two equal altitudes of the sun or a star before and after passing the meridian. The middle point of the arc described in the interval will indicate the required direction. It is necessary to remark, however, that from the declination of the sun constantly changing, except when in the solstitial points, the meridian will not, unless when the sun is in these points, bisect the arc which that luminary describes in passing from a given altitude on one side of the meridian to the same altitude on the other side. A correction, however, may be applied; but it is better to make the observations when the sun is in one of the solstices.

The instruments which the ancients employed for measuring directly the altitude of any of the heavenly bodies were very imperfect. The shadows, projected by the sun, however, enabled them to discover its height with considerable exactness, in the following manner:—Let A B be a vertical rod, and A C the shadow projected by it when the sun is at any altitude which we wish to measure. S B C is a solar ray. The height of the sun will evidently be equal to the angle A C B. Now, we know from trigonometry, that since the angle at A is a right angle, $\tan. ACB = \frac{AB}{AC}$. The length of the rod and shadow, therefore, being measured, the altitude of the sun may be ascertained. By this instrument—which is termed a *gnomon*—two corresponding altitudes of the sun may be observed, and from them the meridian line determined. For when the sun, after having passed the meridian, returns to the same altitude on the other side, the shadow will be again of the same length. By finding the position of such equal shadow, therefore, and bisecting the angle formed by the two, the direction of the meridian, if the sun be in one of the solstices, will be found. The position of the

Fig. 7.



equal shadow will best be discovered by describing a circle, from the foot of the vertical rod as a centre, with the radius of the shadow first found, and observing in the afternoon when the extremity of the shadow projected by the sun just again meets this circle. The meridian altitude will be found by the gnomon, from the length of the meridian shadow. This mode of measuring the altitudes of the heavenly bodies, and determining the meridian line, has been long abandoned. Instruments which enable us to measure angles immediately by arcs of circles, have now been brought to a high degree of perfection, and by them altitudes are at once ascertained. Two corresponding altitudes being observed, the middle of the intercepted arc will be the meridional point. We may in every case verify the meridian line by observing whether the time of the appearance of a star above the horizon be divided by it into two equal parts.

Refraction.] It is proper here to remark, that all the heavenly bodies must appear, from the refraction of light, to be more elevated than they really are. When a ray of light passes obliquely from a medium of a certain density into another medium whose density is different, its direction is changed. If it pass from a rarer to a denser medium, it will be bent towards the perpendicular, and if the contrary be the case, in the opposite direction. If the ray fall perpendicularly upon the rarer or the denser medium, it will suffer no refraction. These facts may be proved and illustrated by the following experiments. Let A B C D be an empty vessel. An object placed at F, in the bottom of the vessel, will not be seen by an eye at H, because the ray F D G passes above the eye; but if the vessel be filled with water, it will become visible. The ray F D will be bent at D from the perpendicular A X, into the direction D H, so that the object at F will be seen upon the ray H D E, as if it were really placed at E. Reciprocally: If the eye be placed at F, an object at H will not be visible when the vessel is empty; but when filled with water, will be seen in the direction F D G, bent towards the perpendicular. An eye at P or F will see an object at F or P. in the same direction whether the vessel be filled with water or be empty. The atmosphere may be supposed to consist of thin strata diminishing in density as we recede from the surface of the earth. Rays of light, therefore, falling obliquely upon it, will be constantly bending towards the perpendicular, and will move in a curve line. The body which projected them will be seen in the direction of a tangent to this curve at the eye of the observer, and will appear more elevated above the horizon than it really is. Thus, the star S will be seen by an observer at O, in the position P. Refraction will be greater the nearer a star is to the horizon; for, as it approaches to the horizontal position, the rays will fall more and more obliquely with respect to the eye, and they must pass through a greater body of air. When the star is in the zenith, the rays which reach the eye will pass perpendicularly through the atmosphere, and

Fig. 8.

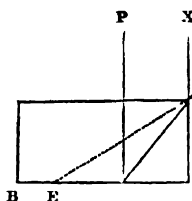
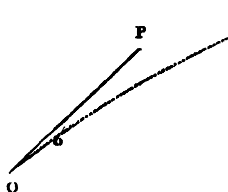


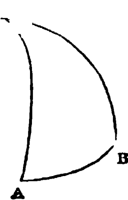
Fig. 9.



will, therefore, not be in the least refracted. Refraction is influenced by the state of the atmosphere, with regard to density, heat, and humidity. Astronomers have investigated formulæ, by which, at any given altitude, an approximation may be made to its amount. But the subject is complicated, and the laws of the variations from changes upon the state of the atmosphere are yet unknown. It is desirable, therefore, in all celestial observations, that they should be made when the star observed is at a distance from the horizon.

Method of Ascertaining the Distance between Two Places. The latitude and longitude of two places on the earth being known, the distance betwixt them may be found. The shortest distance between two places will be an arc of a great circle passing through them. The distance on any other circle passing through the places must be larger, since the radius of that circle being smaller than the radius of the great circle, its curvature will be greater. In the spherical triangle P A B, therefore, let A B be an arc of a great circle passing through two given places, and P A P B their meridians. In this triangle we have given P A P B the distances of A and B from the pole, or the complements of their latitudes, and the angle A P B the difference between their longitudes. The side A B, therefore, may be found from the rules of spherical trigonometry. If A and B be situated upon the same meridian, the distance betwixt them will be equal to the difference between their latitudes; and if upon the equator to the difference between their longitudes. The distance between two places, in degrees, being thus ascertained, the distance in itinerary measures may easily be found, if the magnitude of the earth be known.

Fig. 10.



Though an arc of a great circle be the shortest road between two places, it is seldom the most convenient. In sailing from one place to another, it is of importance for the navigator always to direct his course towards the same point of the compass, for it would be very perplexing if that course were to be constantly changing. He always endeavours, therefore, as much as possible to sail in such a path, that in every part of it, his bearing from the place he is going to may be always the same, even though the distance to be sailed should be thereby considerably increased. The shortest distance will coincide with the path in which the same direction is always preserved, if the two places be situated upon the same meridian, or upon the equator; for those circles are great circles, and all places upon the same meridian are north or south from each other, while all places upon the equator are east or west. If the two places be situated in any other position, a great circle passing through them will not cut the different meridians at equal angles. But it is these angles which determine the direction. It is only when moving in a line which makes equal angles with all the meridians, that we can constantly preserve the same direction. Were the navigator, therefore, to sail in a great circle passing through two places which lie neither in the equator nor under the same meridian, his bearing from the place to which he was going would be continually changing. Lines which make equal angles with the meridians, are termed *rhumbs*. The rhumbs which point directly east and west, will evidently be parallels to the equator. If we were to move along the surface of the earth, always directing our course to the same point of the compass, the path in which we moved

would be a curve, which never returns into itself, but is indefinitely prolonged in a spiral manner, always approaching the pole without ever reaching it. A navigator, therefore, who should attempt to sail from one place to another, by always steering to that point of the compass towards which the place is situated from the point where he set out, would never reach that place, but would be constantly carried farther and farther from it, moving in such a curve as we have above described. This curve, termed the *Loxodromic line*, was discovered by Nonnius, a Portuguese mathematician.

Magnitude and Figure of the Earth.] We shall now endeavour to explain the different attempts that have been made to ascertain the magnitude and exact figure of the earth.

The spherical form of the earth was known to the ancient philosophers, and attempts were made by some of them to ascertain its magnitude. The principle upon which they proceeded is the same with that which has been adopted in modern times. They actually measured a part of a meridian line, and having ascertained the number of degrees which it contained, by observing the different altitudes of some of the heavenly bodies as seen from its extreme points, they were enabled, by the rules of proportion, to discover the length of the whole circumference, supposing the earth to be a sphere. This is exactly the principle upon which the moderns proceed. The chief advantages which they enjoy in their geodesical operations arise from the great delicacy of their instruments.

The first attempt to measure the magnitude of the earth, which we shall notice, is that said to have been made by Eratosthenes, a philosopher of Alexandria, B. C. 194. Eratosthenes was informed, that at the summer solstice, the sun was vertical to the inhabitants of Syene, for it could then be seen, at that place, from the bottom of a deep well. He found from observation, that on the day on which the solstice happens, the sun, at noon, was the 50th part of the circumference of a circle distant from the zenith of Alexandria. Supposing Syene and Alexandria, therefore, to be upon the same meridian, the distance betwixt them would be the 50th part of a great circle upon the earth. This distance being estimated at 5000 stadia, the whole circumference of the earth was found to be 250,000. A degree, therefore, according to Eratosthenes, contains $694\frac{4}{9}$, or, in round numbers, 700 stadia. This result, though something like an approximation to the truth, is considerably wide of it. The distance between Syene and Alexandria was inaccurately estimated; and, besides, these places are not situated under the same meridian.

The next attempt to measure the earth's circumference was made by Posidonius. He knew that the star called Canopus appeared in the horizon at Rhodes, while its meridian height at Alexandria was $7\frac{1}{2}$ degrees. The distance between these two places being estimated by him at 5000 stadia, the circumference of the earth was found to be 240,000. Eratosthenes also measured the distance between Rhodes and Alexandria, and found it to be 3750 stadia; the whole circumference he therefore estimated at only 180,000 stadia.

During the middle ages, about the year 827, part of a meridian line is said to have been measured in Arabia, by order of Almamon, caliph of Babylon, and the length of a degree found to be about 69 English miles.

After the revival of letters, Fernel, a learned French physician, in the year 1525, estimated the value of a degree between Paris and Amiens to be 57,070 toises, or 60,827 fathoms. A result which comes remarkably

near to the measurement of modern times. Yet the method he adopted was very imperfect: having estimated the distance between Paris and Amiens merely by the revolutions made by the wheel of the carriage in which he travelled, after making allowance for the windings of the road.

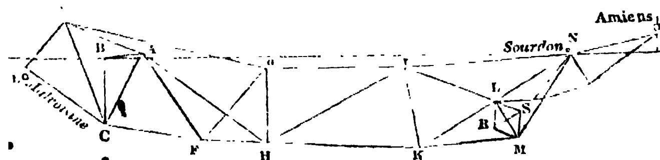
The next attempt was made by Snellius, a Dutch mathematician. He determined the magnitude of the celestial arcs comprised between Alkmaer and Bergen-op-Zoom, and Alkmaer and Leyden, by observing the altitudes of the pole at these places; and measured the terrestrial distances of the three parallels on the meridian, by a series of triangles, the base of one of which he actually measured. From these measurements, the value of a degree was found to be 55,021 toises, or 58,639 fathoms.

In the year 1635, Norwood, an English mathematician, having measured the distance between the parallels of London and York, and determined the celestial arc contained between them, assigns 61,200 fathoms, which is rather more than 69½ miles to a degree.

Ricciolus, however, a celebrated Italian astronomer, from a measurement carried on by him in the neighbourhood of Bologna, a few years afterwards, estimated the degree at 64,363 Bologna paces, which are equal to 62,900 toises, or 67,036 fathoms.

In the year 1669, the Royal Academy of Sciences at Paris resolved to make a new attempt to ascertain the circumference of the earth, and the measurement was intrusted to Picard, a member of the Academy. The theatre of operations made choice of, was the space contained between Sourdon and Malvoisine. These two places were connected together by a series of triangles, as in the annexed figure. In observing the angles of

Fig. 11.



the triangles, telescopes were used, which had never been done before. This was a decided improvement, for by means of them an object could be seen at a greater distance, and the view directed with more certainty to a particular point of it. All the angles of every triangle being successively measured, the observations were verified, on the supposition that the triangle was situated on a plane, and the angles, therefore, equal to 180°. Picard's instruments were not sufficiently delicate to enable him to discover the spherical excess, which has been observed in more recent measurements, as we shall afterwards see. The base, which Picard measured with great accuracy, lay on the road of Villejuif, and extended to 5663 toises, or 6035 fathoms. It is represented in the figure by A B; and that line, and the angles of the triangle A B C being known, the side A C was calculated. Again, in the triangle A C D, A C and the angles being known, the length of C D was found. In this manner Picard proceeded from triangle to triangle as far as Amiens. At Sourdon, another line, represented in the figure by R S, was actually measured as a base of verification, and the difference between its length so found, and that deduced from calculation, did not exceed a few feet. The bearing of a side of one of the triangles in respect of the meridian, was next

determined, from which that of all the other lines became known. The distances between the places that had been measured in the direction of the meridian could then be found, by conceiving perpendiculars to be let fall upon the meridian. The distance between the parallels of Malvoisine and Sourdon turned out to be 58,430 toises, or 62,272 fathoms; while the difference in their latitudes was 1° 11′ 57″. The distance between the parallels of Malvoisine and Amiens, again, was 78,850 toises, or 85,034 fathoms; and the difference in latitude 1° 22′ 55″. The first of these results gave for the length of a degree of the meridian, 57,064 toises, or 60,816 fathoms; and the other 57,057 toises, or 60,808 fathoms. Picard chose the mean between the two, which gave 57,060 toises, or 60,812 fathoms for the degree.

Polar Depression.] Soon after this measurement by Picard had been accomplished, mathematicians began to suspect that the earth could not be exactly spherical, but must be depressed towards the poles. The celebrated Dutch mathematician Huygens seems to have been the first to whom this idea had occurred. He considered, that bodies which revolve upon an axis must acquire a centrifugal force, causing them constantly to have a tendency to fly off from the axis, as may be seen by turning a wet mop rapidly round. The earth, therefore, he conceived, must be swelled out about the equator, and depressed towards the poles. The polar diameter, he conceived, must be shorter than the equatorial, by about $\frac{1}{578}$ of the former. Newton, by reasoning in a similar manner, arrived at a similar conclusion; but the polar depression was supposed by him to amount to $\frac{1}{230}$.

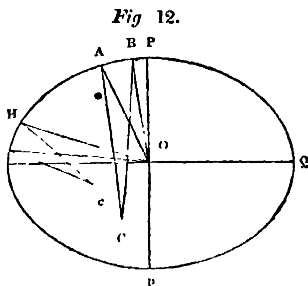
The principle of universal gravitation, discovered by Newton, also enabled him to perceive, that if the form of the earth were spheroidal, that form alone, independently of the centrifugal force, would render gravity weaker at the equator than under the poles. That this was actually the fact, was soon established by observations on the pendulum in different latitudes. When a pendulum in its motion has deviated from the vertical position, the force which attracts it thither again is gravity. The time which it occupies in returning to the vertical position will evidently be longer if the power of gravity be diminished, and shorter if that power be augmented. The observations of Richter, in 1672, were decisive of the question. He transported a pendulum clock from Paris to the Island of Cayenne, which is within five degrees of the equator. On arriving there, the clock was found to lose every day two minutes and 28 seconds; and it was ascertained that the pendulum which beat seconds at Cayenne, was shorter than that which had been brought from Paris. This result was afterwards confirmed by a great many other observations made in different latitudes; and it has been concluded from them, that the polar diameter is shorter than the equatorial, by about the 336th part of the former.

The discovery of the polar depression gave new interest to the measurement of arcs of the meridian. Mathematicians soon discovered that that depression must necessarily occasion the length of the degrees to increase as we approach the poles, in proportion to the amount of the depression; and the measurement of meridional arcs in different latitudes, therefore, would enable them not only to determine the magnitude of the earth, but also to discover the difference between the polar and the equatorial diameters.

It may be proper here to explain how a depression of the earth at the

poles should occasion the degrees of the meridian to increase as we recede from the equator: for the contrary was at one time maintained, even by mathematicians of celebrity. In every curve, the radius of curvature at any point, is always perpendicular to a tangent at the same point. An arc of any curve is equal to a degree, when the radii, drawn from its extreme points and produced so as to meet within the curve, form an angle equal to a degree. Thus, in the figure, if the angle A C B formed by the radii A C, B C, correspond to the 360th part of the circumference of a circle, the intercepted arc A B is equal to a degree. It can be only in the circle which is of uniform curvature that the radii will always meet at the same distance within the curve. In every other curve line, the curvature being variable, the distances at which the radii meet will be variable also, increasing as the curvature diminishes, and diminishing as it increases. Thus, in the ellipse E P Q, if we take two arcs, A B, G H, of the same length, one in the flattest, and the other in the most concave part of the curve, the radii A C, B C, drawn from the extremities of A B, which is in the least concave part, will be longer than the radii G c, H c. The reason is obvious. If A B had no curvature at all, A C and B C would never meet; and the greater the degree of curvature be, they must meet at a shorter distance, and their magnitude consequently be the less. If, therefore, the angle G c H be a degree, A C B must be less than a degree; and hence it evidently follows, that if the axis of the earth be shorter than the equatorial diameter, the degrees of the meridian must increase from the equator to the poles. Those who conceived that an opposite effect must be produced by the depression, were led into the mistake by conceiving that the degrees were determined by the angles A O B, G O H, formed by lines drawn from the extremities of the arcs to the centre of the ellipse. But these lines are not perpendicular to the curve.

Fig 12.



About the year 1736, the Academy of Sciences at Paris, in order to ascertain the correctness of the theoretical conclusions regarding the figure of the earth, resolved actually to measure two portions of its surface in the direction of the meridian, near to the equator and the pole; and they accordingly, in 1736 and 1737, sent out two companies of mathematicians, composed of members of the Academy, the one to Peru, and the other to the polar circle. The results obtained by these mathematicians completely established the depression of the earth at the poles, for the degree measured at the polar circle exceeded that of the equator by 669 toises, or 4218 feet.

The arc of the meridian between Paris and Amiens, which was measured by Picard, had been continued to Collioure on the south, and Dunkirk on the north, about the beginning of the 18th century, by Cassini and Lahire. The conclusion at which these mathematicians arrived, was, that the degrees of the meridian, instead of diminishing, actually increase as we approach the equator. Doubts, however, having arisen concerning the accuracy of this measurement, Cassini de Thury, and Lacaille, were, in 1739, charged with the verification of it. They discovered that some slight errors had been fallen into in the former

measurement, and these being rectified, the French degree was found to be 362 toises, or 828 feet less than that of the polar circle. The polar depression was thus completely established; but the results obtained did not agree as to the amount of that depression.

We shall now shortly notice some of the most remarkable of the other measurements which have been made for ascertaining the magnitude of the earth, and the quantity of the polar depression.

In the year 1784, the Royal Society resolved to ascertain the relative position of the observatories of Greenwich and Paris, by carrying a series of triangles from Greenwich to Dunkirk, to which place the meridian of Paris had already been extended. The execution of the measurement was committed to General Roy, who commenced operations by measuring a base-line on Hounslow Heath, extending to more than five miles. This base was measured with great care, first with deal rods, and afterwards with rods composed of glass. Signals were erected at convenient distances, and in conspicuous situations along the line to be measured, and the magnitude of the angles formed by the straight lines joining these different points, were ascertained with a theodolite, which was furnished with a telescope of high magnifying power. With this instrument angles could be so exactly determined, that the spherical excess was discovered, which had never been observed in any previous measurement. This excess, it is known from geometry, has the same relation to the area of the triangle, that 180° has to the area of a great circle of the sphere; and, therefore, its amount could in every case be known before the angles were observed, by finding the area of the triangle by approximation. The spherical excess being in this way discovered, it afforded the means of verifying the angles as observed by the theodolite, which were found to be determined to fractions of a second. From this measurement, a degree of the meridian in latitude 50° 10′ was found to be 60,843 fathoms, or 69.14 miles.

Soon after the commencement of the French revolution, the National Convention decreed that an uniform system of weights and measures should be established. The philosophers conceived that the basis of this system should be some invariable standard, and they made choice of the ten millionth part of a quadrant of the meridian for the unit of measure. The instruments for determination of angles having been greatly improved since the days of Picard and Cassini, it was resolved that the arc of the meridian of Paris which had been determined by them, should be measured over again by the most skilful mathematicians, and continued to Barcelona, in order that the magnitude of the unit made choice of, might be determined with the utmost precision. The execution of the measurement was committed to Mechain and Delambre, two distinguished members of the academy. They determined the angles of 181 triangles with the repeating circle of Borda, and they measured two bases, one at Melun, and the other at Perpignan. When the second of these bases was inferred from the first by calculation, it was found only about ten or eleven inches shorter than it turned out to be by actual measurement, though the distance between the bases was 436 miles. The latitudes of five different points of the meridional arc were determined; namely, Dunkirk, Paris, Evaux, Carcassone, and Barcelona. From the whole operations, it was found that the quadrant of the meridian was 5,130,740 toises=5,468,513 fathoms; and the compression of the earth $\frac{1}{334}$. Though the length of the degree, however, constantly

decreases as we advance to the south; yet it appears that the decrease is very irregular. The diminution was found to be most rapid in the middle of the line between Evaux and Carcassone, where the degrees diminish at the rate of 32 fathoms. From Carcassone to Barcelona, the decrease is at the rate of 15 fathoms in the degree; while, between Dunkirk and Evaux, the diminution is not more than four.

Similar irregularities in the decrease of the degrees of the meridian, were observed by Colonel Mudge in the trigonometrical survey of England, and by Major Lambton in that of the peninsula of India. They show either, that the earth is not a regular ellipsoid, or that the direction of gravity, from inequalities of density, or irregularities in the superficial part of the earth, is not always perpendicular to the surface. Newton had calculated that the attraction of mountains might considerably derange the plumb-line from the vertical position. The quantity of this attraction may be experimentally ascertained in several ways. The meridian altitude of any celestial body—supposing no disturbance of the plumb-line—must evidently be the same in all places under the same parallel of latitude. If that altitude, therefore, be observed at two places in the same parallel, one close to the mountain, and the other at such a distance from it as to be without the sphere of its attraction, the effect of the mountain in deranging the plumb-line will be discovered. Another method is to determine the difference between the latitudes of two stations, one on the north, and the other on the south side of a mountain, by observations of the stars, and also by a trigonometrical survey of the ground. Half the difference between them would give the deviation of the plumb-line. The effect of the attraction may also be discovered by determining in a similar manner the difference between the longitudes of two places, one on the east, and the other on the west side of the mountain.

The French academicians who went to Peru in 1736, seem to have been the first who endeavoured to find experimentally the effect of mountains in deranging the plumb-line. They found that the great mountain Chimborazo, caused it to deviate only 7½ seconds from the vertical position; but, from the imperfection of their instruments, it is doubtful whether that result may be depended on. In the year 1773, Dr. Maskelyne, astronomer royal at Greenwich, made a variety of observations upon the mountain Schehalion, from which he concluded that mountains of the height of 3000 feet must draw the plumb line 5 or 6 seconds from the vertical position. The Baron de Zach, in the year 1810, made many observations upon a chain of mountains in the neighbourhood of Marseilles, which rise 400 toises above the level of the sea, and found their effect in deranging the plumb-line to be about 2 seconds.

The difference between the polar and equatorial diameters being very small, the earth must deviate little from the spherical form. In estimating the area of the surface and its solid contents, therefore, we may consider it to be an exact sphere. The circumference of the earth, by the French measurement, is equal to 24,857 miles; the diameter deduced from the circumference is equal to 7,912.2 miles. The superficial contents of a globe being equal to four times the area of one of its great circles, the surface of the earth will contain $4 \times 12,428.5 \times 3,956.1 = 196,673,555.4$ square miles. The solid contents of the earth, being equal to the superficial multiplied by a sixth part of the diameter, will be $196,673,555.4 \times 1,318.7 = 259,353,417,505.98$ cubic miles.

Globes and Maps.] We come now, in the last place, to consider the different methods of representing the surface of the earth by artificial globes and maps.

We could obtain only very inaccurate conceptions of the relative situation of the different parts of the earth, and the appearance of the continents, seas, islands, lakes, rivers, kingdoms, and states, which diversify its surface, from the most extensive table of latitudes and longitudes. In order that we may become acquainted with the appearances which the surface of the earth presents, it is necessary that representations, on a small scale, of that surface be presented to the eye.

There are two ways in which the earth may be represented to our view. Upon the surface of a solid having the same figure as the earth, the appearance of the surface of the earth may be delineated. This is evidently the most accurate mode of representing the earth: for an exact image of it may in this way be formed. Such an image of the earth, is termed an *artificial terrestrial globe*. The other way of representing the earth, is by forming a drawing of a part of its surface upon a plane. Such drawings of parts of its surface are termed *maps*.

Artificial Globes. In the preceding part of this essay, we have seen, that though the earth be not exactly a sphere, it deviates very little from the spherical form. The polar diameter is less than the equatorial, by about $\frac{1}{334}$th of the latter, while the height of the highest mountain is not equal to the 4000th part of it. Upon the largest globe that is ever constructed, these differences of the earth from an exact sphere could not be perceived; and the artificial globe, therefore, is always exactly spherical.

Through the centre of the globe let a straight wire pass, this will represent the axis, and the points where it cuts the surface, the north and south poles. A circle drawn at the distance of 90 degrees from either pole is the equator, and another circle drawn from any point of the equator, and at right angles to it, will be the first meridian. The equator and the first meridian are divided into degrees and minutes, which are numbered, beginning at the point where the circles intersect each other. The degrees upon the first meridian are numbered on both sides of the equator, and do not exceed 90. They point out the latitude. The degrees upon the equator are numbered completely round the circle, and extend therefore to 360. They enable us to find out the longitude.

The equator and first meridian are distinguished from parallels of latitude and other meridian lines, by their being graduated. They are also sometimes denoted by double lines.

The equator and first meridian being determined, any place, the latitude and longitude of which are known, may be marked on the globe in the following manner. From the pole as a centre, let a circle be described, cutting the meridian in the point which corresponds to the latitude of the place. This circle will be parallel to the equator, and will pass through the given place. Through the poles, and the point of the equator corresponding to the longitude, let a semicircle be drawn. The point in which this semicircle or meridian intersects the parallel of latitude, will be the position of the place. By proceeding in this manner, the different parts of the surface of the earth might be exactly delineated on the globe. This method, however, is both tedious and expensive, and is never had recourse to for practical purposes. The method employed is to have a map of the world engraved, and distributed into

spherical segments, with which the ball destined for a terrestrial globe is covered. Copies of such map may be multiplied at little additional expense. It belongs to the theorist of maps, to explain the principles on which the surface of the earth is delineated upon these spherical segments.

We shall now suppose that the artificial globe exactly represents the surface of the earth, and proceed to explain the lines which are commonly drawn upon the globe, besides the equator and first meridian, and to describe the apparatus usually attached to it. In order that we might be able to find out from the globe itself, the latitude and longitude of any place, a parallel to the equator and a meridian line would require to be drawn through that place. It is impossible that such lines could be drawn through every point on the globe, and it is unnecessary, for the brass circle placed around it, enables us to find out the latitude and longitude. In this circle, which is placed at right angles to the equator, and is therefore a meridian, the globe is suspended by the axis. One of the sides of the meridian is graduated, or divided into degrees, minutes, and seconds. The globe can be turned round its axis, while the general meridian remains stationary, so that every point of the surface of the globe must pass under some point of the meridian. To find out the latitude and longitude of any place, therefore, we have only to turn the globe round till the given place be brought to the meridian. The number of degrees, minutes, &c. under which the place lies will be its latitude, and the number intercepted upon the equator its longitude. In addition to the general meridian, meridians and parallels of latitude are usually drawn upon the globe, through every 5th or 10th degree of latitude and longitude, according to the size of the globe. These lines point out accurately the latitude or longitude of those places which are situated upon them, and give us a general idea of the situation of other places. Besides meridians and parallels of latitude, the ecliptic is usually drawn upon globes, and also the tropics and polar circles. All these last are commonly drawn with double lines to distinguish them from other meridians and parallels of latitude.

The globe suspended in the general meridian, is placed upon a wooden frame. The upper surface of this frame divides the globe into two hemispheres, one superior, and the other inferior, and represents, therefore, the rational horizon of any place which is brought to the zenith point of the meridian. There are two notches for the meridian to slide in, by which different elevations of the pole may be exhibited. The horizon has commonly drawn upon it the points of the compass, the twelve signs of the zodiac, the months of the year, &c.

There is attached to the general meridian a quadrant, composed of a thin pliable plate of brass, answering exactly to a quadrant of the meridian. It is graduated, and has a notch, nut, and screw, by which it may be fixed to the brazen meridian in the zenith of any place. When so fixed, it turns round a pivot, and supplies the place of vertical circles. It is hence denominated a quadrant of altitude.

A small circle of brass is placed on the north pole. It is divided into 24 equal parts, and is termed an *hour-circle*. On the pole of the globe is fixed an index, which turns round the axis, and points out the hours upon the hour-circle.

There is also often attached to the globe a compass, which is placed upon the pediment of the frame, parallel to the horizon.

Problems solved by the Globe.] Having thus described the globe

and its apparatus, we shall now explain some of the problems that may be resolved by it.

I. *To find the latitude and longitude of any place.*—We have already seen that this is done by bringing the place to the graduated side of the general meridian; the degree of the meridian cut by the place being equal to the latitude, and the degree of the equator then under the meridian being the longitude.

II. *To find a place upon the Globe, its latitude and longitude being given.*—Find the degree of longitude on the equator, and bring it to the brass meridian; then find the degree of latitude on the meridian, either north or south, and the point of the globe under that degree of latitude is the place required.

III. *To find all the places on the Globe that have the same latitude as a given place, suppose London.*—Turn the globe round, and all the places that pass under the same point of the meridian as the given place, London, does, have the same latitude with it.

IV. *To find all the places that have the same longitude or hour with a given place, as London.*—Bring the given place, London, to the meridian, and all places then under the meridian have the same longitude as London.

V. *To find the difference in the time of the day at any two given places, and their difference of longitude.*—Bring one of the places to the meridian, and set the hour-index to twelve at noon, then turn the globe till the other place come to the meridian, and the index will point out the difference of time. By allowing 15 degrees to every hour, or one degree to four minutes of time, the difference of longitude will be known. The difference of longitude may also be found without the time, in the following manner:—Bring each of the places to the meridian, and mark the respective longitudes. Subtract the one number from the other, and we obtain the difference of longitude sought.

VI. *The time being known at any given place, as London, to find what hour it is in any other part of the world.*—Bring the given place, London, to the meridian, and set the index to the given hour; then turn the globe till the other place come to the meridian, and the hour at which the index points will be the time sought.

VII. *To find the distance of two places on the Globe.*—If the two places be either both on the equator or both on the same meridian, the number of degrees in the distance between them, reduced into miles, at the rate of 69⅓ to the degree, will give the distance nearly. If the places be in any other situation, lay the quadrant of altitude over them, and the degrees intercepted upon it by the two places, and turned into miles, as above, will give their distance.

VIII. *To find the antœci, periœci, and antipodes of any given place, suppose London.*—Bring London to the meridian, and find by the meridian the point upon the globe, of which the latitude is as much south as that of London is north. The place thus arrived at will be the situation of the antœci, where the hour of the day or night is always the same as at London, and where the seasons and lengths of the days and nights are also the same, but at opposite times of the year. London being still under the meridian, set the hour-index to 12 at noon, or pointing towards London, then turn the globe half round, till the index points to the opposite hour, or 12 at night. The place that comes under the same point of the meridian where London was, is where the periœci dwell, or

people that have the same seasons, and at the same time, as London, and the same lengths of the days and nights, but have an opposite hour, it being midnight with the one when noon with the other. Lastly, While the place of the periæci is at the meridian, count by the meridian the same degree of latitude south, and that will give the place of the antipodes of London. They have all their hours and seasons opposite to those of London, being noon with the one when midnight with the other, and winter with the one when summer with the other.

IX. *To find the sun's place in the ecliptic and also on the Globe at any given time.*—Find in the calendar, on the wooden horizon, the given month, and day of the month, and immediately opposite will be found the sign and degree which the sun is in on that day. Then, in the ecliptic drawn upon the globe, find the same sign and degree, and that will be the place of the sun required.

X. *The time being given at any place, as London, to find the place on the earth to which the sun is then vertical.*—Find the sun's place on the globe by the last problem; and turn the globe about till that place come to the meridian; mark the degree of the meridian over it, which will show the latitude of the required place. Then turn the globe till the given place, London, come to the meridian, and set the index of the hour circle to the given moment of time. Lastly, Turn the globe till the index points to twelve at noon, and the place of the earth corresponding to that upon the globe which stands under the meridian at the point marked as before, is that which has the sun at the given time in the zenith.

XI. *To find all those places on the earth to which the sun is vertical on a given day.*—Find the sun's place in the ecliptic on the globe, as in the last problem, and bring that place to the meridian. Turn the globe round, and note all the places which pass under the same point. These will be the places sought.

This problem enables us to determine what people are ascii on any given day. It is evident, that in a similar manner we may also find to what places on the earth the moon or any other planet is vertical at a given time: the place of the planet on the globe at that time being found by its declination and right ascension.

XII. *A place being given in the torrid zone, to find on what two days of the year the sun is vertical at that place.*—Bring the given place to the meridian, and note the degree it passes under. Turn the globe round, and note the two points of the ecliptic which pass under the same degree of the meridian. Then, find by the wooden horizon on what days the sun is in these two points of the ecliptic, and on these days he will be vertical to the given place.

XIII. *To find how long the sun shines without setting in any given place in the frigid zone.* Subtract the degrees of latitude of the given place from ninety, which gives the complement of the latitude, and count this complement upon the meridian from the equator towards the pole, marking that point of the meridian; then turn the globe round, and observe what two degrees of the ecliptic pass exactly under the point marked on the meridian. It is evident that the sun will shine upon the given place without setting while it is in these, and all the points of the ecliptic that are nearer to the given place. Find, therefore, upon the wooden horizon the months, and days of the months in which the sun is

in the two points in question, and the intermediate time will be that during which the sun constantly shines at the given place.

XIV. *To find how long the sun never shines upon any given place in the frigid zones.*—Count the complement of latitude towards the south, or farthest pole, and then proceed exactly as in the last problem.[1]

XV. *To rectify the globe to the latitude of any place.*—Move the brass meridian in its grove, till the elevation of the pole above the horizon be equal to the latitude.

XVI. *To rectify the globe to the horizon of any place.*—Rectify the globe to the latitude of the place by the last problem; and then turn the globe on its axis till the given place come to the meridian. The place will then be exactly on the vertex of the globe, 90 degrees distant every way from the wooden horizon; and that horizon, therefore, will represent the horizon of the given place.

XVII. *To find the bearing of one place from another, and their angle of position.*—Rectify the globe to the horizon of one of the places. Screw the quadrant of altitude to the zenith point of the meridian, and make it revolve till the graduated edge passes through the other place. Then look on the wooden horizon for the point of the compass, or number of degrees from the south, where the quadrant of altitude meets the horizon, and that will be the bearing of the latter place from the former, or the angle of position sought.

XVIII. *To find all those places on the earth to which the sun at a given time is rising or setting; also what places are then illuminated by the sun, or in darkness; and where it is noon, or midnight.*—Find the place to which the sun is vertical at the given time, and rectify the globe to its horizon, in which state the place will be in the zenith point of the globe. Then is all the hemisphere above the wooden horizon enlightened, or in daylight, while the hemisphere below the horizon is in darkness, or night; lastly, to all these places by the eastern side of the horizon, the sun is just setting, and to those by the western side, he is just rising.

XIX. *The time of a solar or lunar eclipse being given, to find all those places at which the eclipse will be visible.*—Find the place to which the sun is vertical at the given time, and rectify the globe to the horizon of that place. Then, by the last problem, it is evident, that if the eclipse be solar, a part of it at the beginning only will be seen in places which are not far above the eastern side of the horizon; while, in the rest of the upper hemisphere, the whole of the eclipse will be visible. A part of it at the end will be seen in places which are near to the lower side of the western part of the horizon. If the eclipse be lunar, the moon will be in the opposite point of the ecliptic to the sun, and vertical to that point of the earth which is opposite to the place to which the sun is vertical. The eclipse, therefore, will be visible in the lower hemisphere.[2]

XX. *To find the beginning and end of twilight, on any day of the year, for any latitude.*—It is twilight in the evening from sunset till the sun is eighteen degrees below the horizon; and in the morning from the time

[1] In the above solutions of the last two problems no allowance is made for refraction, which raises the sun when near the horizon, more than half-a-degree. The problems, therefore, will be resolved more correctly, if we set the mark on the meridian half a degree higher up towards the north pole than the complement of latitude indicates.

[2] In the last two problems no notice has been taken of refraction.

the sun is within eighteen degrees of the horizon till the moment of his rising. Therefore, rectify the globe to the given latitude, set the index of the hour-circle to twelve at noon, and screw on the quadrant of altitude. Find the point of the ecliptic which is opposite to the sun's place, and turn the globe on its axis westward along with the quadrant of altitude, till that point cut the quadrant in the eighteenth degree below the western side of the horizon. The index will then show the time of dawning in the morning. Next turn the globe and quadrant of altitude towards the east, till the same opposite point of the ecliptic meet the quadrant in the eighteenth degree below the eastern side of the horizon. The index will then show the time when twilight ends in the evening.

XXI. *To rectify the globe to the present situation of the earth.*—Rectify the globe to the horizon of the place. Its situation will then correspond to that of the earth; and, if it stand in the sun, it will be illuminated as the earth is.[a]

[a] The invention of globes is of great antiquity. Anaximander, of Miletus, a disciple of Thales, who flourished, B. C. 580, is said to have invented the terrestrial globe. Some allusions to the globe may be found as early as Hipparchus' time, in the writings of Pliny and Ptolemy. The latter possessed an artificial globe with a universal meridian. Strabo makes mention of the terrestrial globe; and a cotemporary of his, Propertius, refers directly to depicted worlds; and Claudius, who describes Archimedes' glass sphere, evinces great knowledge of the constructions of orreries, spheres, &c. which must have then existed among mathematicians.

Among the improvers and makers of globes may be subsequently ranked the following as chief: Martin Behaim, Tycho Brahe, Regiomontanus, Schonerus, Gemma Frisius, Gr. Mercator, J. Hondius, Johnsonius, Wm. Saunderson, Wm. Bleau, &c. some of whom wrote learnedly on their uses: but, in this respect, the preference is certainly due to Mr. Robert Flues, whose Latin treatise was afterwards published by Hendrius, and then by Pontanus, with figures and notes. This work was translated into English by J. Chilmead, in the year 1637. The Venetian Caronelli, with the help of Claudius Molines, and other Parisian artists, executed a globe of 14 Parisian feet in diameter, for Louis XIV., and a celestial globe of the same size.

No globes had any pretensions to accuracy, taste, or elegance, till the time of John Senex, F. R. S.; who, about the year 1739, delineated and engraved sets of plates for globes of 9, 12, 17, and 28 inches in diameter, which he used with the globes then manufactured by himself, making these instruments more accurate and useful than any former maker. The terms and names of places on the globes of 17 and 28 inches in diameter, were Latin. About the year 1759, and just after the decease of Mr. Senex, Mr. Benjamin Martin, a learned optician, became possessed of Mr. Senex's plates, and continued for many years to manufacture the globes with various improvements. In the year 1765, the late Mr. George Adams caused new plates for 18 and 12 inch globes to be engraved. The terms and names of these, like the larger ones of Senex, were printed in Latin. Instead of horary circles fixed on the meridian, with moveable indices for computation of time, Mr. Adams contrived circular wires, to envelope the globe about the equinoctial circles, with sliding brass points; so that as the globes were revolved on their axis, the time by these was pointed out on the graduations of the great circle, which, consequently, gave a more extensive and conspicuous scale of time than could be had by means of the smaller horary circles. He also applied to each globe a semicircular slip of brass, connected at the poles, having on the terrestrial, a sliding compass, and on the celestial, a sliding sun. The brass slips were graduated each way from the equinoctial, so that the positions for rhomb-lines, right ascensions, and declinations, could be better and more readily obtained.

The horary, or hour-circle, of the globes being usually attached to the external edge of the meridians, prevented a free and uninterrupted motion of the meridians, with their poles, through the horizons of the globes, to admit of an universal position of the axis, with respect to the horizon, for all latitudes of places. Mr. James Harris, of the Mint, in the year 1740, contrived a method of fixing the brass horary circles at the poles, under the meridians, *i. e.* between the surface of the globes and the interior edge of the meridian, and to be occasionally moveable, independent either of the globe or meridian. In this manner, the globes were rendered completely useful for the solution of problems in all latitudes.

About the year 1785, Mr. G. Wright contrived a moveable index, applicable to the poles of a globe, to act in a similar manner as the circle of Mr. Harris, which pointed to circles of hours engraved round the poles of each globe. This he considered a method of obviating the great friction or adherence that sometimes inconveniently takes place between the surfaces of the circle and globe.

Maps.] The necessity of maps arises from large globes being very expensive and inconvenient; while, on small ones, sufficient details cannot be exhibited. As it is impossible to represent accurately upon a plane any part of a spherical surface, globular maps, that is, maps drawn upon a piece of pasteboard, or other substance, formed into the segment of a sphere have been proposed. Such maps would exhibit every place in the same relative position as upon the earth, but they are never made use of, owing to their inconvenient shape. Maps are constructed by making a projection of the globe, on the plane of some particular circle, supposing the eye placed at some particular point, according to the rules of perspective.[4]

In maps three things are required: First to show the latitude and longitude of places, which is done by drawing a certain number of meridians and parallels of latitude. Secondly, the shape of the countries must be exhibited as accurately as possible; for real accuracy cannot be

From the lapse of years, the numerous astronomical and geographical discoveries, and the Latin terms adopted in the larger globes of Senex and Adams, these globes became inconvenient, embarrassing, and finally obsolete. A short time before the year 1800, sets of new and accurately engraved plates were suggested, and considered as a desideratum in astronomy, by the Astronomer Royal, Dr. Maskelyne, Sir Joseph Banks, Professor Vince, and others; and conformably to this object, in the year 1800, were completed and produced a set of entirely new plates, for globes of eighteen inches in diameter, under the denomination of 'New British Globes.' On these, the graduation and lines are laid down in the most correct manner, and with much greater accuracy than in any former globe plates. The drawing from which the terrestrial globe is engraved, was an entirely new one, from the hands of Mr. Arrowsmith, an eminent geographer. The latitudes and longitudes of places are rectified from the latest and best authorities; and there are likewise inserted all the authentic discoveries to the present time. The celestial globe contains a description of a complete catalogue of stars, clusters, planetary nebulæ, &c., to the amount of nearly 6000, from the observations and communications of Dr. Maskelyne, Dr. Herschell, Rev. Mr. Wollaston, &c., and inserted from calculations made by Mr. W. Jones, optician, of Holborn, London, in their exact positions, to the present period. To the principal stars are annexed Bayer's Greek letters of reference; and the whole are circumscribed by well-designed figures of the constellations, faintly engraved. The great circles are divided into twenty minutes of a degree, and the equinoctial in addition into two minutes of time, so that, by estimation, the solution of problems may be obtained to five minutes of a degree, or half-a-minute of time; a degree of accuracy sufficiently useful, not only for all the common problems, but most of the trigonometrical ones. As the reading of time is found to be a ready and convenient method, by hour-circles attached to the meridians, the horary circle has been contrived to admit of being slid away from its pole, upon the exterior edge of the meridian; this is done by making the extremity of the pole, which carries the index of the horary circle, moveable by unscrewing. The horary circle being attached to the meridian barely by springs, when the index is unscrewed, the circle may consequently be slid to any part of the meridian. This contrivance is necessary only for the circle of the north pole of Messrs. W. & S. Jones' terrestrial globe, who have adopted this circle; and at the south pole of the globes, have employed the interior brass index, or circles above mentioned. Plates for the British globes of 12 inches diameter, have been reduced and abridged from the 18 inches above mentioned. Plates for globes of 9, 12, and 21 inches diameter, have been engraved by Mr. Carey. The stars of his celestial globes, are not circumscribed with the figures of the constellations.

[4] Anaximander, it is said, about 500 years before Christ, first invented geographical tables, or maps. The Peutingerian tables, published by Cornelius Peutinger of Augsburg, contain an itinerary of the whole Roman empire; all places, except seas, woods, and deserts, being laid down according to their measured distances, but without any mention of latitude, longitude, or bearing.

The maps published by Ptolemy of Alexandria, A. D. 144, have meridians and parallels, the better to define and determine the situation of places, and are great improvements in the construction of maps: though Ptolemy himself owns that his maps were copied from some that were made by Marinus. Titianus, &c., with the addition of improvements of his own. Agathodemon, in the 5th century after Christ, executed some maps for the geography of Ptolemy. In the 8th and following centuries, metal planiglobes and maps were found in the libraries of the rich. Charlemagne possessed a silver planiglobe; and Roger I. of Sicily, a silver globe of great weight. There is a map existing, dated 1265, of the then known earth, drawn on twelve skins of parchment. In 1513, the Brothers Appian drew a map containing what was then known

obtained by any projection, because the map is on a plane surface, whereas the earth is globular. Thirdly, the bearings of places, and their distances from each other must be shown. The projection of maps is made, as we have observed, according to the rules of perspective. If the eye be supposed to view the earth from an infinite distance, the appearance represented on a plane is called the *orthographic* or *straight projection*. In this case, the parts about the middle are very well represented, but the extreme parts are contracted. Geographers usually employ the *stereographic projection*, where the eye is supposed to be on the surface of the earth, and looking at the opposite hemisphere. There is likewise the *globular projection*, in which meridians, equidistant upon the surface of the earth, are represented by equidistant circles in the map. *Mercator's projection*, is that in which both the meridians and parallels of latitude are represented by straight lines.

In all maps, the upper part is the north, the lower the south, the right is eastern, and the left hand western.[5] On the right and left, the

of the New World. In 1514, the mathematician Werner divided the earth into four parts. Mercator of Ruremonde, who died in 1591, was the first of note among the moderns, and next to him Ortelius, who undertook to make a new set of maps, with the modern divisions of countries and names of places; for want of which, those of Ptolemy were become almost useless. After Mercator, many others published maps, but for the most part they were mere copies of his. Gemma Frisius, who invented the present manner of engraving maps in 1595, gave a map of the world, with the discoveries in the East and West Indies. Towards the middle of the 17th century, Bleau, in Holland, and Sanson, in France, published new sets of maps, with many improvements from the travellers of those times, which were afterwards copied, with little variation, by the British, French, and Dutch; the best of these being those of Vischer and De Witt. And later observations have furnished us with still more accurate and copious sets of maps, amounting perhaps to 6000 original works. The best among the English, are Arrowsmith, Bogue, and Ackrell; among the French, De Lisle, D'Anville, and Barbier; among the Italians, Rizzi Zannoni; and among the Germans, Dussefeld, Sotzmann, and Reichard.

[5] The *Map* which fronts the title page of this work, is a representation of the world upon two hemispheres, one containing the continent of America, and the other the continent formed by Europe, Asia, and Africa. The *Equator*, or *Equinoctial Line*, is represented by a graduated straight line passing through the centres of the circles which form the map, and the *Meridians* by arches of circles cutting the equator, at the distance of every 10 degrees, and terminating in the poles. *Parallels of latitude*, at the distance of every 10 degrees, are represented by arches of circles, lying from right to left, and terminating in the circumference of the circles which bound the hemispheres, so as to divide each of the quadrants between the poles and the equator into nine equal parts. The *Tropics* and *Polar Circles* are also drawn. The latitude of each of the parallels is marked at its extremities on the margins of the map, and the longitude of each meridian is marked on the equator, and reckoned eastward and westward from the meridian of London. To find the latitude and longitude of any point in this map, if the given point be at the intersection of a parallel of latitude and a meridian, the latitude will be found at the extremities of the parallel on the margin, and the longitude at the point where the meridian cuts the equator; thus the latitude of the most easterly point of Italy will be found to be 40 degrees north, and the longitude about 20 degrees east from London. If the given point be not at the intersection of a parallel and a meridian, its latitude and longitude may yet be found, by carrying one's finger from it, as near as can be guessed, along an imaginary parallel of latitude, and observe at what degree it meets the margin of the map, and that will be the latitude sought; in like manner the longitude may be found, by tracing an imaginary meridian through the place till it meet the equator.

Kingdoms or *provinces* are divided from each other by a row of single points, and they are often further distinguished by being painted with different colours. *Mountains* are imitated in the form of little rising hillocks; and *forests* are sometimes represented by a collection of little trees. The names of *villages* are written in a running hand, those of *cities* in a Roman character, and those of *provinces* in large capitals. The *sea* is generally left as empty space on the map, except where there are rocks, sands or shelves, currents of water, or wind. *Sands* or *shelves* are denoted by a great heap of little points placed in the shape of these sands, as they have been found to lie in the ocean, by sounding the depths. *Currents of water* are described by several long parallel crooked strokes, imitating a current. The *course of winds* is represented by

degrees of latitude are marked; and on the top and bottom, the degrees of longitude are marked. When the meridians and parallels of latitude of a place are wanted, a parallel line of latitude must be drawn through it, by the same rules the other parallels are drawn, and it cuts the sides at the degree of latitude of the place: and to find the longitude of the place, draw a circle of longitude through it, by the same rules as the other circles are drawn, and it cuts the top and bottom at the degree of longitude of the place.

the heads of arrows pointing to the coasts toward which the wind blows. *Small rivers* are described by a single crooked waving line, and *large rivers* by such double and treble lines made strong and black. *Bridges* are distinguished by a double line across the river.

GENERAL GEOGRAPHY.

PART II.—PHYSICAL GEOGRAPHY.

To describe the earth as a natural body, such as it came forth from 'the ALL-PERFECT HAND,' and the relations subsisting between it and the [illegible] *sical Geography*,—a science which, as all its facts can only be ascertained by the united observation of successive ages, has not yet been perfected, or reduced into a complete systematic form. The physical geographer considers the earth as a whole; he directs his researches to its principal features and phenomena,—to its various productions in respect of situation,—to the physical changes which have been wrought upon its surface,—and finally, examines those great general conclusions respecting its formation and history which these researches suggest. It is, however, to be observed, that we are acquainted with the external crust only of the earth and the surrounding atmosphere; for by the deepest artificial excavations which have yet been made, we have not approached nearer to the centre of the earth than $\frac{1}{1720}$ part of the semidiameter, or perhaps not so much as $\frac{1}{10000}$ part, if we make allowance for the height of some of the deepest mines above the level of the sea, which is the true surface-line of the earth. The interior of our globe, therefore, is wholly unknown to us; and philosophers must confine their speculations regarding it to very doubtful analogical reasonings. We shall in this essay treat, 1st, of the land; 2d, of the sea; 3d, of the atmosphere; 4th, of the productions of the globe; 5th, of the various changes which have taken place on its surface; and, lastly, of the general conclusions deducible from the facts thus brought together.

CHAP. I.—OF THE LAND.

General View.] THE total superficies of the globe is usually estimated at about 200,000,000 British square miles, and the natural division of this surface is into earth and water: about seven-tenths of the whole being occupied by the ocean, and the remaining three-tenths consisting of land, elevated above the level of the sea, unequally distributed, and interspersed with smaller collections of water, at various heights, and, in a few instances, somewhat lower than the general surface of the ocean. The terrestrial surface consists of two continuous spaces of land, of vast extent, distinguished by the name of the *Old* and *New Continent*; and a multitude of smaller detached portions called *islands*. It deserves attention, that while the general direction of the land in the two continents is entirely different, the direction of the large *peninsulas*, or those parts of a continent which run out into the sea, is similar; and that these peninsulas uniformly terminate in a high rocky promontory, having a bay on the west, and an

island or cluster of islands on the east side. Thus Cape Comorin has the Arabian Gulf on the W. and the island of Ceylon on the E. Africa terminates in the Cape of Good Hope, and has on the W. the large Gulf of Guinea, and on the E. the extensive island of Madagascar. The western coast of America, from the Straits of Magellan to the Tropic of Capricorn, forms one great basin, and on the E. are the Falkland and Sandwich Islands. New Holland, which in point of extent may almost be regarded as a third continent, has on the S.W. a gulf of considerable depth, and on the E. the Island of New Zealand. Even Europe exhibits a similar configuration; the point of land which forms one part of the Strait of Gibraltar, has the Gulf of Seville on the W., and on the E. the group of the Spanish islands. The only exceptions to this remark, are the peninsula of Yucatan, in Mexico, and that of Jutland, in Denmark, both of which are directed towards the north, while all the rest point south. The first feature which strikes our attention in surveying the land-surface of our globe is the inequalities and diversities of appearance which it presents. There are very few perfect planes upon earth: the greater number,—perhaps all of them, have a more or less perceptible inclination; and those countries which we describe in general terms as flat, have in reality an undulated surface. The lowest districts of a country are most commonly its shores. The land rises gradually from the beach, and usually attains its highest elevation in the interior or central parts of the country. Indeed every island, and even the continents themselves, may be considered as composed of one vast mountain, having its roots fixed in the bowels of the earth, its lower regions covered by the waves of the ocean, and its upper parts divided into all those inequalities of surface which land-scenery everywhere presents. The distribution of water and land is very unequal: if we compare the northern and southern hemispheres as divided by the equator, we shall find that, supposing the quantity of land in the northern hemisphere to be represented by 16, the quantity in the southern will be scarcely equal to 5. Buffon and some other philosophers, therefore, asserted that a great continent must exist towards the south pole, in order to counterbalance the mass of land in the northern hemisphere; but the high southern latitudes have as yet been found to contain only a few islands. However, this fact does not prove that there is a less mass or weight of land in the southern than in the northern hemisphere; for it is possible that the land may be only rather more depressed in the south, and consequently covered by the sea.

Mountains.] The most considerable elevations of the earth's surface are called *mountains*. *Hills* are distinguished from mountains by their smaller size. A series of mountains or hills, connected together by one continuous base, such as the Andes, is called a *chain*. A collection of these chains is called a *system*. Thus we say the system of the Alps, the Julian chain. Mountains present a variety of external forms. Their general shape is conical; that is, they diminish gradually, into a more or less pointed summit. But this ordinary outline assumes various modifications, especially in very high mountains, which sometimes shoot into the form of enormous crystals, or appear crowned with a vast and rocky battlement, or present a highly fantastic outline of naked rocks, heaped and crowded upon each other in every position. These appearances are called *needles*, *peaks*, *teeth*, *domes*, *forks*, *horns*, &c. according to their supposed resemblances; and this

difference of outline is thought by some geologists to indicate a difference also of internal structure and composition. When a mountain rises into two ridges at the summit, with a circular hollow between them, it is said to have a *saddle-ridge*. When the highest ridge is divided into a number of distinct teeth, it is called a *serrated-ridge*. The deep rugged excavations formed in the sides of mountains by the descent of streams are called *ravines;* and the extensive hollows which occur between chains of mountains are denominated *vallies*. Mountains which rise from the plain at an angle below 45°, are considered as having a gentle inclination; in proportion as the angle exceeds 45°, the ascent is said to be steep. The greater number of mountains have one of their sides very steep, while the other presents a gradual slope. Thus the Pyrenees are steeper towards the south than the north; and the Alps on the side of Italy than that of Switzerland. The cause of this configuration is very obvious, when we reflect that chains of mountains are frequently nothing more than the abrupt borders of highland plains or plateaus, obliquely inclined to a lower terrace. And hence with most of the chains of the globe their steepest side is that which approaches to the sea. Thus the Himalaya mountains are steepest on the S.W. sides, which front the Indian plains; and the Elboors are steepest towards the Caspian sea. In general also, mountains that surround lakes or basins present their steepest sides to the water.

Connexion of Chains.] A greater or less connexion may always be traced between the chains of mountains in the same country; nay, some connexion may perhaps subsist between the whole mountain-systems of our globe. Thus the Uralian mountains which divide Asia from Europe, and direct one branch towards the White Sea and Nova Zembla, seem connected with the ridge which divides Norway and Sweden from Russia. Another chain stretches out from Northern India to Thibet and Cashmere—where it forms the most elevated region of the whole earth—and runs towards the west through Persia, and eastwards through China. From the highest land of Northern Asia, at the mountains of Bogdo, which separate the Calmucs from the Monguls, runs another chain, under the name of Massart, southward to Thibet. Another goes towards the west, under the name of Alak, through the steppes of Independent Tartary and Bucharia, and joins the Uralian mountains. A third branch of the Bogdo, called Zangai, runs eastward through Mongolia and Chinese Tartary, and forms the Corea and the cliffs and islands of Japan. A fourth branch is the Altai mountains, which bound Siberia from the Irtysh to the Amoor. Between the Caspian and the Black Sea lie the Caucasian mountains. The probable connexion of this with one of the preceding chains has not yet been traced; but it sends branches through Asia Minor to Arabia, which form the Taurus, Mount Sinai, and Lebanon. Another branch goes round the Black Sea towards Macedonia, where it diverges into a number of chains. The Carpathian mountains stretch from the Black Sea, between Moldavia, Wallachia, and Transylvania, through Poland and Silesia, and connect themselves with the German mountains. The Sudetic chain runs through Austria, between Bohemia and Silesia, and sends some branches N.E. through the Saxon Erzgeburge and the Voigtland. The Alps are connected with the neighbouring chains of Germany, Italy, and France; and the Appenines probably extend under the sea towards the mountains of Africa, where the Larger Atlas may be connected with the Arabian

chain. Secondary chains run along the banks of the Nile, through Upper Egypt, Nubia, and Abyssinia, into the unknown countries of the interior, where they are probably connected with the Mountains of the Moon, whence chains may stretch into Southern Africa towards the mountains of the Cape. With the South American Cordilleras a few secondary chains are connected; and one chain proceeds northward, through the isthmus of Panama, into North America, where it runs along the western coast, and sends several branches into the interior. Future travellers may perhaps ascertain that this chain is connected with the mountains of Asia in the highest north.

Insulated Mountains.] Some mountains are completely insulated, that is, are quite remote from any chain or group, more particularly those of a volcanic origin. The rock of Gibraltar, and the fortress of Gwalior, in Hindostan, are of this description. Sometimes we find these solitary masses exhibiting only an abrupt naked rock; others are covered with beautiful verdure, and slope gently down to the plains.

Economy of Mountains.] Many authors have regarded mountains as imperfections in the frame of the terrestrial globe, and one of the consequences of that fearful breaking-up of the structure of the globe which took place at the period of the deluge. But this opinion seems wholly fanciful. The eternal hills form as it were a frame-work for the security and consolidation of the softer parts of the earth, which might otherwise be swept away by the fury of the winds and waters. They are the reservoirs of rivers, and the storehouses of the richest minerals; they increase the surface, and consequently the products of the earth; and give diversity and richness to natural scenery. Wolfius thinks that mountains preserve the earth's equilibrium, and the uniformity of its motions; and we know that in many instances they have furnished heroic nations with the means of repelling foreign invasion.

Classes of Mountains.] The most general and natural division of earthy bodies is founded upon the substances of which they are composed. The earths are of various kinds, colours, and qualities. The most widely diffused earth, and in fact the basis of the whole frame of the globe is *stone* of different species. The strata of mould with which the great bed of stone is covered, consists of stones crumbled to powder by the action of the atmosphere, and the elementary remains of plants and animals which have perished upon its surface. The natural fertility of a country depends upon the extent to which this species of soil is found in it. The various species of stone are not thrown together without any principle of order and connexion; they are found occupying certain distinct and relative situations, in which they compose what are called *strata*. Werner, the celebrated founder of the German school of mineralogy, of which the principal geologists in Europe are disciples, first explained the laws of stratification and determined the rules by which the relative age of minerals might be fixed, and their various species traced through all the successive changes which they have undergone. Daubisson, Dolomieu, Spallanzani, Breislack, Cordier, Ramond, Cuvier, Hutton, Playfair, Jameson, Macculloch, Humboldt, Steffens, Leopold Von Buch, and Von Baumer, have since distinguished themselves in this path of science, and have advanced various new and occasionally conflicting views.

Primitive Rocks.] The appearance presented by the mountains and solid parts of the earth's surface, irresistibly leads us to the conclusion,

that in the early ages of the world a universal deluge overspread the whole frame of the globe. On no other supposition can we account for those traces of violent destruction or agitation by water, which are to be met with in every country, or the situation of those marine productions which we find at the tops of the highest mountains. The most ancient mountains, or those forming the basis of all the others, are entirely destitute of organic remains and petrifactions, and in all probability existed before the universal deluge. They consist of granite, gneiss, mica slate, primitive limestone or dolomite, serpentine, primitive clay-slate, syenite, porphyry, and quartz. The great bulk of the highest or primitive mountains is composed of granite,—a mixture of felspar, quartz, and mica, disposed in distinct granular concretions of various magnitudes and forms.[1] Granite not only forms the most elevated masses at the surface of the globe, but descends into the bowels of the earth, where it is supposed by some geologists to form a vast connected vaulting, supporting all the other masses of matter which compose the crust of the globe. It is seldom found in the advanced chains.

Transition Rocks.] The primitive rocks are succeeded by the transition rocks, which do not exhibit any organic remains, but occasionally contain petrifactions. To this class of rocks belong clay-slate, floetz-limestone, greenstone, pyrite slate, grey wacke, and transition chalk. The inclination of transition stratas is always regulated by that of the granite strata on which they rest.

Floetz Rocks.] The distinction between primitive and floetz rocks lies partly in their external appearance, the former being high and steep, the latter low and flat,—partly in their internal constitution,—and partly in the matters of which they are composed. The elder floetz rocks are of higher elevation than the others, and consist of sandstone, breccia, coal, and slate-clay, on which the finest impressions of antediluvian plants are perceived. The younger floetz mountains are usually situated at a greater distance from the primitive mountains, and flatten gradually as they recede from the main chain till they sink into the plain. Their stratas exhibit a species of sand-breccia of a very regular form, a bituminous marl-slate with remains of fishes, and many varieties of gypsum, and sandstone. The upper stratas exhibit gypsum and chalk, intermingled with flints and petrifactions. A remarkable feature in the floetz formations is the transverse veins and galleries which in some instances intersect the stratas. These are sometimes empty, and sometimes filled with fossil substances, and lead, copper, and cobalt ores. In general, the floetz mountains contain mines of copper-slate, alum, vitriol-slate, calamine, naphtha, coal, rock-salt, and salt and warm springs.

Alluvial Soil.] From the above three classes of formations, we must distinguish the very latest which have been produced from partial motions of the fresh waters at the surface of the globe: as, for instance, on the shores and mouths of the Mississippi, the Amazon river, and the Nile; or by the gradual depositation from subsiding lakes, of which a singular instance occurs in the parallel roads of Glen Roy in our own country. We also find instances of alluvial deposits, either from the debris of the cliffs, or from the earthy substances kept in suspension by

[1] From this observation we must except the Chimborazo mountain, which, according to Humboldt, consists of an enormous mass of porphyry reposing upon granite.

the waters of the ocean, on the shores of the Baltic, the Mediterranean, and the German Ocean. In these sandy and clayey deposits, the bones of various large animals are frequently discovered in a state of calcination, or strongly impregnated with bitumen. Floetz, chalk, and sandstone, occur in alluvium; also pit-coal, and argillaceous clay. Alluvial formations are often found covered with insulated blocks of granite, the presence of which cannot be easily accounted for.

Volcanic Rocks.] Besides these masses of stone and soil formed by precipitation, we find a class of rocks and earths at the surface of the globe which have been produced by the action of subterraneous fire. Although there are still several active volcanoes in different regions of the globe, their number is small when compared with that of the extinguished volcanoes, whose activity at some distant and unknown period is proved by indubitable evidence. Thus, in Germany, there are traces of about fifty extinguished volcanoes in one small tract of country, extending from Göttingen to the Rhine. In Auvergne, in France, we find a line of volcanoes, which appear to have been extinguished for above 2000 years, stretching 60 leagues in length. Volcanoes are not a class of mountains peculiar to any particular district of the earth; they rise in the midst of primitive, or of floetz ridges, as well as in plains, and also break out from unfathomable depths below the sea. Shaw, however, states, that in the volcanic districts a series of points seemingly connected may be traced. The whole granitic chain which borders the Pacific is crowned by volcanoes, beginning at the Straits of Magellan, with the Andes, which in Chili have sixteen burning craters. Those of Peru are very numerous and terrible, as are those of the isthmus of Mexico and California. The littoral chain to Alashka offers several volcanoes, some in activity. Others are found in that semicircular chain of islands between the continents, terminating near Kamschatka, in which peninsula are five active volcanoes, besides many extinct craters, which reach to Daouria. South of Kamschatka, the ignivomous chain traces the Kurile islands, Jesso, and Japan. A series of volcanic islets joins on to the Marianne Isles, which have nine active volcanoes, and thence runs through Polynesia. Another branch runs south, by Lieoukiou, Formosa, the Philippines, Indian Archipelago, and Australasia, to New Zealand, where we perceive unequivocal signs of subterranean fires. Several ramifications go off to the Indian Sea. There are volcanic appearances in the Himalayah mountains. In the Mauritius is an active volcano; the Isles of France and Madagascar, St. Paul, and Amsterdam, are covered with lavas, ashes, and scoriæ; the mineral waters and confused mountains of the Cape of Good Hope indicate subterranean fires. On the coast of America, Guadaloupe, Dominica, and Trinidad have active craters. Fires burst forth occasionally in the caverns of Lemnos, Milo, and Santorin. The Ionian Isles, in the Adriatic, are volcanic; and new islands have been formed by volcanic explosions in the Grecian Archipelago within the 18th century. Sicily has its Etna, Naples its Vesuvius, and Strombolo lightens up the islands of Lipari. All Italy offers vestiges of ancient volcanoes, in the Appenines; on the coasts of Provence are the extinct craters of Olioules and Evenos; there is one on the Alps of Dauphiny; and in Spain volcanic solfaterras, lavas, and puzzolanas are found in the environs of Burgos. All Upper Germany, between the Alps and Krapacks, indicates ancient volcanoes, especially in Bohemia, Hesse, Lusatia, Hungary, and Silesia. Mount Atlas rests on volcanic ground,

and also the islands of St. Helena and Assumption, composed of lavas and ashes; the Cape Verd Islands, of which Fuego always throws out flames; the Canaries, whose Peak of Teneriffe is a higher volcano than Etna; the Azores, incessantly disordered by submarine fires; the British Isles, with Ireland, famed for its Giants' Causeway; the Hebrides, the Feroe Islands; and, finally, Iceland, which terminates this long chain by Mount Heckla, a focus more active than Vesuvius. When these fires were kindled,—by what sort of fuel they are still maintained,—at what depths below the surface of the earth they are placed,—whether they have a mutual connexion,—and how long they may continue to burn, are questions which do not admit an easy decision. The greater number of volcanoes rise in the form of a cone. Their mouth, or crater, has generally the shape of a cup, or an inverted funnel; in some instances, however, the lava breaks out from the sides. When the fires find no issue, they produce earthquakes. When Vesuvius throws off its inflammable contents by moderate and regular eruptions, the inhabitants of Naples stand in little dread of the occurrence of an earthquake, which is always most violent after a period of long repose. The extent of volcanic influence is amazing. The great eruption of Tomboroo, in one of the islands of the Indian Archipelago, was felt throughout a circular space of 2000 miles in diameter. It seems to be a general rule, that the greater the mass and the elevation of the mountain, the less frequent, but more tremendous are the eruptions. Volcanic productions have been arranged in six classes: *viz.* 1*st*, Opaque lavas, including basalt, remarkable for its regular prismatic forms; 2*d*, Porous lavas; 3*d*, Vitrified lavas, affording a real opaque glass of a dark colour, known by the name of Iceland agate; 4*th*, Pumice-stone, a well-known mineral, specifically lighter than water; 5*th*, Volcanic ashes, of a clear gray colour, which, in the form of powder, are called *puzzolana*, and when conglomerated together, *tufa*, or *trass*; 6*th*, Volcanic breccia, a species of lava containing a variety of foreign substances. When these volcanic products are reduced to dust by the action of the atmosphere, they produce a highly fertile soil. Some species of lava are solid, and can be wrought into different fancy articles, such as snuff-boxes; the common lava is made use of in Italy for paving the streets, and in building. Sulphur, and a variety of salts, are produced on the sides of volcanic craters; and in some instances immense quantities of boiling water are ejected by volcanoes.

Caverns.] The caverns which are so frequently found in mountains, particularly in limestone formations, have been formed by the action of water,—by earthquakes,—by the sudden sinking of portions of the soil, or by subterranean fires. They either consist of a range of galleries, or of one or more grottoes, lying behind or above each other. The depth of some caverns exceeds 1000 feet; and some, such as the Nicojack cave in the territory of the Cherokees, extend several miles in length. The stalactite columns and singular concretions, formed by the dripping of water from their sides and roofs, frequently give singular beauty to their interior, and when illuminated by torch-light, produce a magnificent and dazzling spectacle. From some caverns there is a continual rush of wind; others emit peculiar vapours; in some clear springs well up; and others are traversed by streams of water. Many curious petrifactions and large accumulations of the bones and teeth of various known and unknown animals have been found in caverns, where they must have been deposited at some very distant period. Among the most remarkable caverns are

those of Alcantara near Lisbon; those of Castleton, Pool, and Fingal, in Great Britain; that of Sturth in Ireland; of Ombos in Egypt; Del Cane and Puzzuolo near Naples; the caverns of Mount Pilate in Switzerland; that of the Sorcerers in the Cevennes; of Saussenberg near Basle; the cavern of the Dragons in Darmstadt; the Labyrinth in Crete; and the grotto of Antiparos.

Petrifactions and Fossil Remains.] Petrifactions are organic bodies, which, instead of having mouldered away into earth, have preserved their form, and being mixed with earthy particles, have in the course of time been changed into stone. Petrifactions have been found of many different known and unknown species of quadrupeds, birds, amphibious animals, fishes, insects, and plants. These bodies were at first supposed to be *lusus Naturæ*, and Camerarius and some others were weak enough to consider them as her first essay of vegetable and animal organization: as if that Creative Wisdom, at whose word the world and its inhabitants sprung into existence, might be necessitated to fashion a leaf or a bone previous to the creation of a plant or an animal! Wiser and better-informed naturalists have demonstrated petrified bodies to be the genuine relics of organic matter. When the form of a body merely has been left indented upon the surface of a stone, it is called an *impression*. We most commonly meet with impressions, especially of ferns, among slate-stone. The parts of vegetables, and their impressions, found in mountains of a schistous, or even sometimes of a calcareous nature, are chiefly of plants now existing between the tropics, which could neither have grown in the latitudes of England and France, in which they are dug up, nor have been carried and deposited there by any of the acting forces under the present constitution of nature. Petrifactions are sometimes calcinated and brittle, sometimes hard and solid as stone itself; the former are found in alluvium, in which too we find many vegetable remains, the organization of which still subsists though their substance has suffered a change in colour, smell, or consistence; the latter are usually discovered in the more solid parts of the floetz formations. The more solid petrifactions consist chiefly of extinct species of snails and marine animals; and it is remarkable that, as in the case of plants, the petrifactions of the known species of animals are frequently found in regions in which, according to their present habits, they could no longer exist. Thus the remains of the animals of the torrid zone have been discovered in the highest North; but are never met with in the warmer regions. Petrifactions and fossil remains are more common in some places than in others; but there are few districts in which they have not been discovered. Oyster-shells have been found in the Andes at an elevation of 14,120, and ammonites in the Himalaya, at an elevation of 16,000 feet above the level of the sea, and impressions of ferns and agatized wood, in the coal-pits of England, 2000 feet below the same level. Amongst the remains of the animal kingdom, shells and zoophytes are the most abundant. Among these are purple oysters, echini, medusas, nautilites, chamites, and others. In Greece and in Spain we often travel over nothing but shells; and in the neighbourhood of Touraine, in France, there exists a continuous bed of broken shells of about nine ancient square leagues in superficial extent, and at least 20 feet in thickness. Next to the testaceous kinds of sea-animals, fishes are the most frequent. Different kinds of fossil tortoises have been discovered in Europe. A beautiful fossil of the sea-turtle, weighing 180 pounds, was recently discovered in a mass of ferruginous limestone in the Stone

Ridge off Harwich. The coppery schist of Thuringia furnishes specimens of fossil lizards, and they are found at Elsten in England, imbedded in the clay. Petrifactions and impressions of birds are less common, and are in general only incrustations of calcareous tufa of the last age of geological revolutions; but at Auvergne there have been recently discovered eggs perfectly preserved, and skeletons of birds, in a deposite which is the oldest in the order of time. Besides these petrifactions, the bones, teeth, and even whole skeletons of large animals, such as whales, elephants, and rhinoceroses, have been discovered in Germany and on the banks of Siberian rivers. The mammoth is an extinct species of the elephant, differing from the two living species—the African and Indian. The remains of this animal have been found in Europe, but chiefly in Siberia. The mastodon, an animal nearly similar in appearance and bulk to the Indian elephant, has left its remains upon both continents. A recent number of the *Boston Journal of Philosophy* gives an account of the discovery of some fossil remains, in low prairie grounds, between Plaquemines and the lakes, which from their enormous size, would almost render credible the stories by Father Kircher and Pontoppidon, of the Kraken and Norway sea-snake. If the monster to which these bones belonged were of the Balaena species, its length could not be less than 250 feet. Mr. Bullock, in his Travels, relates, that he saw near New Orleans, what are believed to be the remains of a stupendous crocodile, and which are likely to prove so, intimating the former existence of a lizard at least 150 feet long; for he measured the right side of the under jaw, which he found to be 21 feet along the curve, and 4 feet 6 inches wide; the others consisted of numerous vertebræ, ribs, femoral bones, and toes, all corresponding in size to the jaws; there were also some teeth; these, however, were not of proportionate magnitude. These remains were discovered a short time since in a swamp near Fort Philip; and the other parts of the mighty skeleton are, it is said, in the same part of the swamp. It would occupy far more space than we can afford to describe the various animals of which fossil specimens have been found, or the inexplicable circumstances under which they present themselves to us. Petrified and perfectly preserved shells are often seen close by the side of others which are calcined and wasted. Here we discover great beds of shells regularly deposited and without any foreign substances amongst them; there they are jumbled together with fragments of sand, clay, granite, and other substances. In Italy we find petrified fishes, whose living species is now found only in the seas around Otaheite; the petrified shells of England are only inhabited by the living animals on the coasts of Florida. In one place we discover the remains of one single species of animal, in another we find the bones of elephants and horses, beavers and dogs, cats and mice, panthers and deer, huddled and blended together without order or distinction. Fossil human bones have lately been discovered in the caves of Durfort and Kosritz. The former in the department of La Garde, in France, 300 feet above sea-level, and the latter in Saxony. In the former the animal remains are human bones alone; whilst in the latter they are mingled with those of other animals, both extinct and existing.[2]

[2] "It is curious to observe," says a writer in the 18th volume of the *Edinburgh Review*, "how different an impression the same natural appearances have made on the human mind in different states of its improvement. A phenomenon which, in one age, has excited the greatest terror, has, in another, been an object of calm and deliberate

Springs.] An innumerable multitude of greater and smaller streams intersect the land-surface of the globe, which is also spotted with lakes of various dimensions and at different elevations above the level of the sea. All lakes and rivers have their sources in springs, which by the well-known law of gravity, must always lie higher than the waters which flow from them. Springs which flow perpetually, and without any sensible diminution or increase of their waters, are called *perennial*; such as run only for a time, and at certain seasons of the year, are called *periodical springs* The latter are very common in Switzerland, and are supposed to be produced by partial overflowings of water from the caves or natural cisterns in the interior of the mountains, which, when filled, throw off the superfluous water. Some springs are called *intermitting*, because they flow, and then stop and flow, and stop again. Several springs exist in Iceland, from which the water flows only in sudden gushes: a phenomenon probably caused by the action of subterraneous vapours. There are also *reciprocating springs*, whose waters rise and fall, or flow and ebb, at regular intervals. The spring of Fonsanche, in Languedoc, flows every day for above seven hours, and then stops for nearly five: rising each day fifty minutes later than the preceding day. The Bullerborn, a fresh water spring in Westphalia, rises with a great noise. There is another at Colmars, in Provence, which stops every seven minutes. This spring was affected by the great earthquake which destroyed Lisbon in 1755, and changed into a perennial fountain; but in 1763 it began again to stop at intervals. One of the most remarkable fountains of ancient times, was one of which Herodotus and Diodorus Siculus have transmitted an account. It was called 'The Fountain of the Sun,' and was situated near the Temple of Jupiter-Ammon. At the dawn of day, this fountain was warm; as the day advanced, it became progressively cool; at noon it was at the extremity of cold; at which time the Ammonians made use

observation; and the things which have at one time led to the most extravagant fiction, have, at another, only served to define the boundaries of knowledge. The same comet which, from the age of Julius Cæsar, had *three* times spread terror and dismay through the nations of the earth, appeared a *fourth* time, in the age of Newton, to instruct mankind, and to exemplify the universality of the laws which that great interpreter of nature had discovered. The same fossil remains, which, to St. Augustine or Kircher, seemed to prove the former existence of giants of the human species, were found, by Pallas and Cuvier, to ascertain the nature and character of certain genera and species of quadrupeds which have now entirely disappeared. From a very early period, indeed, such bones have afforded a measure of the credulity, not of the vulgar only, but of the philosophers. Theophrastus, one of the ancients who had most devoted himself to the study of nature, believed, as Pliny tells us, that bones were a sort of mineral production that originated and grew in the earth. St. Augustine says, that he found, on the sea-shore near Utica, a fossil human tooth, which was a hundred times the size of the tooth of any person living. Pliny says, that, by an earthquake in Crete, a part of a mountain was opened, which discovered a skeleton sixteen cubits, or twenty-four feet long, supposed to be that of Orion. At a much later period, Kircher tells us of a skeleton dug up near Rome, which, by an inscription attached to it, was known to be that of *Pallas*, (slain by *Turnus*,) and was higher than the walls of the city. The same author tells us, that another skeleton was found near Palermo, that must have belonged to a man four hundred feet high, and who therefore could be no other than one of the *Cyclops*, most probably Polyphemus himself. The same author has given the measures of several other colossal men, and exhibits them in an engraving adapted to a scale, and placed in order, from the common size up to that of the giant last mentioned. The belief in men of such enormous stature, no doubt arose from the appearance of bones of elephants, and other large animals found in the earth. When we consider, that the credulity and misinterpretation that are here so striking, are not the errors of the weak and illiterate, but of men of talents and learning,—the best instructed by reading, conversation, and foreign travel, of any in the ages in which they lived,—we cannot help being struck with the difference between the criterion of truth as received in those ages and in the present time."

of it to water their gardens and shrubberies. At the setting of the sun, it became again warm; and continued to increase as the evening proceeded, until midnight, when it reached the extremity of heat; as the morning advanced, it grew progressively cold. There was a fountain also equally curious in the Forest of Dodona. It is said to have had the power of lighting a torch; at noon it was dry; at midnight full; from which time it decreased till the succeeding noon. Cashmere is said to abound in fountains, which the natives call miraculous. Pliny the Younger describes one near the Larian lake, which increased and decreased three times every day. The ancients were never weary of attributing peculiar properties to fountains. That of Arethusa was supposed to have the power of forming youth to beauty; and that of Colophon, of enabling the priest of the Clarian Apollo to foretel future events. Of medicinal and detrimental fountains, we have many instances, vouched by writers, modern as well as ancient. Philostratus mentions one that occasioned the leprosy; Vitruvius speaks of another near Zama, in Numidia, that gave unwonted loudness to the voice. We read of some that caused immediate death, some the loss of memory, and others that restored it. Many of them have doubtless a fabulous origin, yet it would be too presuming to doubt the absolute possibility of their existence. Pliny speaks of two fountains, one in Judea, the other in Æthiopia, which, being impregnated with sulphur, had the property of oil in respect to burning. The same property is given to a river in Cilicia, and a fountain near Carthage, by Vitruvius. Herodotus relates that, in the country of the Atlantes in Africa, was a hill of salt, on the summit of which bubbled a spring of fresh water. At Guilford, in Connecticut, is a fountain, the water of which will evaporate, if corked in a bottle ever so strictly. Some writers mention one rising in Mount Soracte, the waters of which boiled at the rising of the sun. In Greenland, most of the springs and fountains rise and fall with the tide. Many in Spain, in England, and in Wales, have similar periodical returns; and under the rocks of Giggleswick, in the West Riding of Yorkshire, there is a well that ebbs and flows several times in the course of an hour. When the weather is very wet, or very dry, it ceases to flow.

The purity of springs depends upon the nature and extent of the strata through which they pass. The purest and most limpid waters have their sources generally at a considerable elevation, and their specific weight is nearly equal to that of rain-water. The common spring-water is usually more or less impregnated with mineral and earthy matters, particularly with gypsum, lime, and saline particles. Those containing a sensible proportion of gaseous or mineral particles, are called *mineral springs.* They have been divided into four classes: viz. 1*st*, *acidulous waters*, or such as are combined with carbonic acid gas, or fixed air; 2*d*, *saline*, or such as contain a notable proportion of one or more alkaline or earthy salts; 3*d*, *sulphureous* or *hepatic*, that is, such as are impregnated with sulphuretted hydrogen gas; and 4*th*, *martial* or *chalybeate waters*, containing salts of iron.

The temperature of springs, both common and mineral, is in general subject to the general causes which regulate the heat of the earth; and when the body of water is considerable, and proceeds from a great depth, the temperature of the spring corresponds with the mean annual temperature of the place of observation. But from this uniformity of temperature, many springs exhibit very great deviations, and

some even reach the temperature of boiling water. The hot springs of La Trinchera, situated three leagues from Valencia, form a rivulet which, in seasons of the greatest drought, is 2 feet deep, and 18 feet wide. Their temperature is 90.3 centigrade, or 195° of Fahrenheit; but that of the springs of Urijino, in Japan, is 212° of Fahrenheit. Eggs placed in the Trinchera springs are boiled in four minutes. At the distance of 40 feet from them, are other springs entirely cold. Rocks are frequently formed by depositions from the waters of hot springs. The well-known hot springs of San Philippo, in Tuscany, have formed a hill of calcareous tufa, in many places as compact and hard as limestone. The ancient temples, and the gorgeous palaces and churches of Rome, and indeed the whole of the streets and squares of the former Mistress of the world, are built of concretionary masses, which, according to Professor Jamieson, have been deposited by springs. Many cold, or common perennial springs, throw out great quantities of calcareous matter, of which we have an example at Starlyburn in Fifeshire.

Various have been the opinions of philosophers concerning the origin of springs; but those which deserve most notice are the three following: *1st*, That the sea-water is conveyed through subterraneous ducts, or canals, to the places where the springs flow out of the earth; but as it is impossible that the water should be thus conveyed to the tops of mountains, since it cannot rise higher than the surface, some have had recourse to subterraneous heats, by which being rarefied, it is supposed to ascend in vapours through the bowels of the mountains. *2d*, Others, advance the capillary hypothesis, or suppose the water to rise from the depths of the sea, through porous parts of the earth; but they seem to lose sight of one principal property of this sort of attraction, for though the water rise to the top of the tube or sand, it will rise no higher, because it is only by the attraction of the parts above that the fluid rises. Therefore, though the waters of the sea may be drawn into the substance of the earth by attraction, yet it can never be raised by this means into a cistern, or cavity, so as to become the source of springs. The 3d hypothesis is that of the sagacious naturalist, Dr. Halley, who supposes the true sources of springs to be melted snow, rain-water, dew, and vapours condensed. The Doctor found that every ten square inches of the surface of the ocean yield a cubic inch of water in vapour per day, every square mile 6,914 tons, and every square degree, or 69 English miles, 33 millions of tons. Now, if we suppose the Mediterranean to be 40 degrees long, and 4 broad, its surface will be 160 square degrees, from whence there will evaporate 5,280 millions of tons per day in the summer-time. The Mediterranean receives water from nine great rivers, viz. the Ebro, the Rhone, the Po, the Danube, the Dniester, the Dnieper, the Don, and the Nile; all the rest being small and their water inconsiderable. Let us suppose that each of these rivers convey ten times as much water to the sea as the Thames—which yields daily 76,032,000 cubic feet= 203 millions of tons; all the nine rivers will produce 1,827 millions of tons; which is little more than one-third of the quantity evaporated each day from the sea. The prodigious quantity of water remaining, the Doctor allows to rains, which fall again into the seas, and for the uses of vegetation. As to the manner in which these waters are collected, so as to form reservoirs for the different kinds of springs, it seems to be thus: The tops of mountains in general abound with cavities, and subterraneous caverns formed by nature to serve as reservoirs; and their

pointed summits rising into the clouds, attract the vapours of the atmosphere, which are in consequence precipitated in water, and by their gravity easily penetrate through beds of sand and lighter earth, till they are stopped in their descent by more dense strata, as beds of clay, stone, &c., where they form a basin or cavern, and working a passage horizontally, issue out at the sides of the mountains.

Rivers.] The effusion of springs, and the flowings of melted ice, form little currents more or less gentle, which are termed *rivulets.* The union of two or more of these currents forms *streams,* which, following the declivity of the ground, unite most frequently before they reach the ocean in one large stream or *river,* which conveys their collected waters to the sea. It is evident, that if the earth were a perfectly level surface, no river could exist; for when water flows in a current or stream, it does so in consequence of the end of the channel towards which it is floating being lower than that from which it proceeds. But the rapidity of a river does not always depend upon the degree of its declivity. Thus the Danube is much more rapid than the Rhine, although the bed of the latter is much more inclined. This is owing to the greater volume of water. The Inn, which forms the main southern branch of the Danube, is a far more rapid stream than its rival, and rushes quite across the Danube at Passau. The reason is obvious. For, supposing the volumes of both to be equal, or nearly so, the Inn has a slope of 6000 feet to traverse, and the other only 1200 feet of slope to traverse previous to their union at Passau, the superior degree of declivity being as 5 to 1. The Danube is a very broad stream after passing through Hungary, being fully two miles broad at Giurgevo, and interspersed with islets, and having very low banks, and cannot therefore be very rapid. It is where the channel is deep and narrow in proportion to its volume of water that a river is most rapid. Three things must concur to make a rapid river—the impetus with which the stream is propelled at the source; the great continuity of slope; and the quantity of water successively poured in on both sides, from slopes equally great. The most rapid known streams are the Inn and Rhone, in Europe; the Platt and Missouri, in North America; and the Whangho, in China. The comparative velocity of the great rivers of the globe is not yet known, otherwise than by inference from casual observation, volume of water, and degree of slope. When the fall of a river is sudden, and its course extremely quick, it forms what is called a *rapid;* and when it throws itself suddenly over a rock, it is called a *fall* or *cataract.*

The strength of a river depends upon the volume of water which it contains, and the rapidity with which it flows. In general, the streaming of a river is strongest in the middle of the current; the elevation of the water is also greater there than at the sides. But the water stands lowest in the middle at the mouth of rivers, because the water of the sea mixes with the sides of the fresh water current. Some rivers, like the Danube, rush with such force into the sea, that their waters are distinguishable for a considerable space from those of the ocean. It is only by a very large mouth, like that of the Elbe or the Plata, that rivers can quietly discharge their waters into the ocean. The river of the Amazons exhibits a terrific spectacle twice a-day at its mouth, when the two tides of fresh and salt water meet each other. The quantity of water which some rivers discharge into the ocean is enormous. But until we know with precision the mean annual average of rain for every parallel of latitude,

or have obtained accurate soundings of the rivers, and by a train of annual experiments on each, determined their rate of increase and decrease, and of accelerated and diminished velocity, it is not possible to obtain any positive results on this subject.

The change which the action of rivers is constantly operating upon the districts through which they pass is considerable. Many of them now flowing through large vallies, seem to have excavated these vallies by the silent action of their waters through an unknown course of centuries. Some of them, such as the Elbe near Pirna, and the Hudson in America, have actually worn a channel for themselves in the solid rock; but never could a river by its own force alone have opened for itself a passage through solid rocks similar to those which border the Upper Rhine; it must at the first have found the outline of its course deeply marked out. Some rivers sink into the earth, and run for a considerable distance under ground. Great inundations of rivers are occasionally produced by the sudden melting of snow and ice. In the hotter zones, where heavy rains fall periodically, all rivers are subject to annual inundations.

Lakes.] Those collections of waters surrounded on all sides by the land, and having no visible connexion with the sea, nor any perceptible current, are called *lakes*. There are a vast number of lakes scattered over the surface of the earth; but the largest belong to North America. They may be divided into four classes.

The first class comprehends those which are not supplied by any river or brook, but give origin to streams. These are doubtless fed by springs, which well up in the bed of the lake till they reach a level, where they find an outlet. The largest rivers originate in lakes of this class, which, as they receive no stream, must necessarily in most cases be in elevated situations.

Another class of lakes is very numerous, consisting of all such as receive and discharge streams of water. When a river encounters a large hollow in its course towards the ocean, it must necessarily fill this basin to its own level, and thus form a lake, before it can pursue its course. These lakes have often springs of their own also. Sometimes several rivers empty their waters into a lake, which discharges only a single stream at the lowest point of the shore. In such cases, the river which proceeds from the lake usually receives the name of the largest of the streams which run into it. The largest lakes of this class are in North America.

The above two classes of lakes are the most common. The phenomena of the other two classes are of more difficult explanation. The most remarkable lake of the third class is the Caspian Sea, which receives the tributary waters of the Volga, amounting by the best calculations to 518,400,000 of cubic feet per hour, besides several other streams: and that without any perceptible increase of bulk, though it has no visible outlet by which it can discharge its superfluous waters. Besides the Caspian, and its neighbour the Aral lake, there are several other lakes of this class in the steppes of Asia, and the deserts of America; and the great question which they suggest is: What becomes of the waters which they are constantly receiving from their tributary rivers, and from the precipitation of the atmosphere? Some have asserted that this lake, and others exhibiting similar phenomena, stand in connexion with the sea by means of subterranean canals. But this is cutting the Gordian knot, instead of loosing it, as no evidence has yet been produced demonstrative

of the existence of such canals. Tooke has suggested, that the true reason of the Caspian Sea remaining equally full, may perhaps be found in the quality of its bottom, which consists, not of a thick slime, but of a shell-sand, the particles whereof touch but in few points, and consequently form a porous bottom, through which the water may be filtered, and fall into the abyss beneath. This solution of the difficulty is not satisfactory; but it may be observed, that the mountains to the south of the Caspian are very spongy, and abound with springs, which proves either absorption, or a very strong evaporation. Perhaps the latter principle is sufficient to account for the phenomenon. In the valley of the Missouri, a climate as cold as that of the Caspian, the evaporation is so great, that a table-spoonful of water placed on deck was evaporated in a very short space of time, and the ink-case had to be daily replenished with the fluid during a voyage of 1000 miles downwards from Fort Mandan, in 47° N. Lat. The evaporation on the river was so great, that though more than 20 rivers of large volume fell into the Missouri in that space, it was not sensibly enlarged. Now, the case is just the same with the Caspian Sea. There is a continual travelling, so to speak, of fluid from the sea to the mountains of Caucasus and Elboors, by way of the atmosphere, and from these heights again to the sea, by the rivers and torrents which water its slopes and traverse its sides. The Aral Lake is not equal to 1-10th of the Caspian in square surface, although it receives two great rivers, the Oxus and the Jaxartes, whose waters, if united, would equal those of the Volga, and yet it is never increased. The same answer must be returned as in the case of the Caspian, that as much goes off by evaporation as is received from these rivers. The case is exactly the same with all lakes which receive rivers but send out none, as those of Maraugha and Van, in Koordistaun, of the Dead Sea in the Holy Land, and the Lake of Zarang in Sigistaun. It seems to be an established fact, that the terrestrial surface is getting drier gradually, though imperceptibly, perhaps. The Lakes of Maraugha, Zarang, and the Dead Sea, are sensibly diminishing, and the volume of the Volga is decreasing sensibly. The Lakes of Canada are said to increase and decrease for alternate periods of so many years.

The fourth class comprehends those lakes which neither receive nor throw off any visible stream of water. These lakes are in little distinguishable from ordinary ponds, which enlarge or contract their dimensions according to the state of the atmosphere. In this class we may include those collections of water called *fens* and *marshes*. These are often covered with a thin vegetation, which either rises from the muddy bottom of the lake, or forms a kind of floating net-work upon the surface.

The depth of lakes is very various. Near Boleslaw in Bohemia, there is a lake of unfathomable depth, which sometimes in winter emits blasts of wind sufficiently strong to raise up in the air pieces of ice several quintals in weight. Some lakes vary in depth from one foot to one hundred fathoms. Lake Erie in North America is said to have been rising gradually for the last six years. The water of some lakes is very pure and transparent; that of others turbid. Some are salt and brackish; others sweet and fresh. Middle Asia possesses a great number of salt lakes, which acquire their saline particles from the surrounding soil.[a] Some

[a] "There are several lakes on the face of the earth which have no outlet towards the sea,—all the water which falls into them being again removed by evaporation alone,—and such lakes are never of fresh water, because every substance, which, from

inland lakes, such as Loch-Lomond, are remarkable on account of their frequent violent agitations from unknown causes. Some lakes never freeze; others in high latitudes, or those covered with the shade of thick forests or high mountains, such as Loch Winnoch, remain covered with perpetual ice. Saussure estimated the mean temperature of the Swiss lakes at 42°. Such lakes as contain a large proportion of naphtha and sulphur, and such as have no visible outlet, give out noxious exhalations, which are highly prejudicial to organic beings, and the influence of which is felt at a considerable distance from their shores.

Some lakes exhibit the same phenomena as the intermittent springs, and doubtless from the same causes on a larger scale. There can be little doubt that deep lakes have frequently been converted by the action of streams into extensive valleys. Thus the Spey is met by a barrier of red sandstone at Fockabers, which must have converted a very extensive tract of country behind into a lake. At the village of Rothes, it is met by a much higher barrier, which must have occasioned a re-stagnation all the way to Kenrara; and the hollows seen on the rising grounds, to the west of this village, show that the river had formerly flowed over the top of this barrier, and had frequently altered its course before settling in the present channel.

Earthquakes.] Earthquakes, says Dr. Shaw, are unquestionably the most dreadful of the phenomena of Nature; and are not confined to those countries which, from the influence of climate, their vicinity to volcanic mountains, or any other similar cause, have been considered as more particularly subject to them. Their effects have often been felt in the British Isles, although not in so extensive and calamitous a degree. The most remarkable earthquakes of ancient times are described by Pliny in his Natural History. Among the most extensive and destructive of these, was one by which thirteen cities in Asia Minor were swallowed up in one night. Another which succeeded, shook the greater part of Italy. But the most extraordinary one described by him, happened

the beginning of time, rain could dissolve in the regions around them, has necessarily been carried towards them by their feeding streams, and there has remained. The great majority of lakes, however, being basins constantly running over at one part towards the sea, although all originally salt, have in the course of time become fresh, because their only supply being directly from the clouds, or from rivers and springs fed by the clouds, is fresh, while what runs away from them must always be carrying with it a proportion of any substance dissolved in them. We thus see how the face of the earth has been gradually washed to a state of purity and freshness, fitting it for the uses of man; and why the great ocean necessarily contains in solution all the substances that originally existed near the surface of the earth, which water could dissolve, namely, all the saline substances. The city of Mexico stands in the centre of one of the most magnificent plains on the face of the earth, 7000 feet above the level of the sea, and surrounded by sublime ridges of mountains, many of them snow-capped. One side of the plain is a little lower than the other, and forms the bed of a lake, which is salt, for the reasons stated above; but the lake will not long be salt, for it now has an outlet. About 150 years ago an extraordinary increase of the lake took place, and covered the pavements of the city; an artificial drain was then cut from the plain of Mexico to the lower country external to it, about sixty miles from the city. This soon freed the city from the water; but, by becoming every year deeper, from the wearing effects of the stream, which has never ceased, it is still lowering the surface of the lake, is daily rendering the water less salt, and is converting the vast salt marshes which formerly surrounded the city into fresh and fertile fields. The immense continent of Australasia, or New Holland, (larger than Europe,) is supposed by some to have been formed at a different time from what is called the old world, so different and peculiar are many of its animal and vegetable productions; and the idea of a later formation receives some countenance from the immense tracts of marshy or imperfectly drained land which have been discovered in the interior, into which rivers flow, but seem not yet to have worn down a sufficient outlet or discharging channel towards the ocean."—*Arnott's Physics.*

during the consulate of Lucius Marcus and Sextus Julius, in the Roman province of Mutina. He relates, that two mountains felt so tremendous a shock, that they seemed to approach and retire with a most dreadful noise. They at the same time, and in the middle of the day, cast forth fire and smoke, to the dismay of the astonished spectators. By this shock, several towns were destroyed, and all the animals in their vicinity killed. During the reign of Trajan, the city of Antioch was, together with a great part of the adjacent country, destroyed by an earthquake; and about three hundred years after, during the reign of Justinian, it was again destroyed, with the loss of 40,000 of its inhabitants. Lastly, after an interval of sixty years, that ill-fated city was a third time overwhelmed, with a loss of 60,000 souls. The earthquake which happened at Rhodes, upwards of 200 years before the Christian era, threw down the famous Colossus, together with the arsenal, and a great part of the walls of the city. In the year 1182, the greater part of the cities of Syria and of the kingdom of Jerusalem were destroyed by a similar catastrophe; and in 1594 the Italian writers describe an earthquake at Puteoli, which occasioned the sea to retire 200 yards from its former bed. The great earthquake of 1755 extended over a tract of at least 4,000,000 of square miles. It appears to have originated beneath the Atlantic Ocean, the waves of which received almost as violent a concussion as the land. Its effects were even extended to the waters in many places where the shocks were not perceptible. It pervaded the greater portions of the continents of Europe, Africa, and America; but its extreme violence was exercised on the south-western parts of the former. Lisbon, the Portuguese capital, had already suffered greatly from an earthquake in 1531; and, since the calamity about to be described, has had three such visitations, in 1761, 1765, and 1772, which were not however attended by equally disastrous consequences. In the present instance, it had been remarked, that, since the commencement of the year 1750, less rain had fallen than had been known in the memory of the oldest of their inhabitants, unless during the spring preceding the calamitous event. The summer had been unusually cool, and the weather fine and clear for the last forty days. At length, on the 1st of November, about forty minutes past nine in the morning, a most violent shock of an earthquake was felt; its duration did not exceed six seconds; but so powerful was the concussion, that it overthrew every church and convent in the city, together with the royal palace and the magnificent opera-house adjoining to it; in short, not any building of consequence escaped. About one-fourth of the dwelling-houses were thrown down; and, at a moderate computation, 30,000 individuals perished. Between the 1st and 8th of November, twenty-two shocks were reckoned. This earthquake was also felt at Oporto, Cadiz, and other parts of Europe, and equally severe in Africa. A great part of the city of Algiers was destroyed. In many places of Germany the effects of this earthquake were very perceptible; but in Holland the agitations were still more remarkable. The agitation of the waters was also perceived in various parts of Great Britain and Ireland. At sea, the shocks of this earthquake were felt most violently. Among other catastrophes, the captain of the *Nancy* frigate, off St. Lucar, felt his ship so violently shaken, that he thought she had struck the ground, but on heaving the lead, found she was in a great depth of water. The earthquakes in Sicily and the two Calabrias began on the 5th of February 1783, and continued until the latter end of the

May following; doing infinite damage, and exhibiting at Messina, in the parts of Sicily nearest to the continent, and in the two Calabrias, a variety of phenomena. The earth was in a constant tremor, and its motions were various, being either vertical or whirling round,—horizontal or oscillatory, that is, by pulsations or beatings from the bottom upwards. There were many openings, or cracks in the earth; and several hills had been lowered, while others were quite level. In the plains, the chasms were so deep that many roads were rendered impassable. Huge mountains were severed, and portions of them driven into the valleys, which were thus filled up. The total amount of the mortality occasioned by these earthquakes in Sicily and the two Calabrias, was, agreeably to the official returns, 32,367; but Sir William Hamilton thought it still greater, and carries his estimation to 40,000, including foreigners. The shocks felt since the commencement of these formidable earthquakes amounted to several hundreds; and among the most violent may be reckoned the one which happened on the 28th of March. It affected most of the higher parts of Upper Calabria, and the inferior part of Lower Calabria, being equally tremendous with the first. Indeed these shocks were the only ones sensibly felt in the capital, Naples. With relation to the former, two singular phenomena are recorded. At a distance of about three miles from the ruined city of Oppido, in Upper Calabria, was a hill, having a sandy and clayey soil, nearly 400 feet in height, and nearly 900 feet in circumference at its base. This hill is said to have been carried to the distance of about four miles from the spot where it stood, into a plain called Campo de Bassano. At the same time, the hill on which the city of Oppido stood, and which extended about three miles, divided into two parts, being situated between two rivers, its ruins filled up the valley, and stopped their course, forming two large lakes, which augmented daily. By the earthquake experienced in Chili in 1822, a great line of coast is stated to have been lifted permanently up to the height of several feet above its former level; and it deserves remark, that though earthquakes are sometimes felt in the interior of countries, their most terrible effects occur chiefly along the coast. On the 2d March, 1825, the city of Algiers was visited with a tremendous earthquake, which destroyed at least 10,000 human beings. It is worthy of remark, that the same phenomena which generally precedes the eruption of Etna and Vesuvius, occurred at Bluda, on this occasion; namely, all the wells and fountains in the neighbourhood became perfectly dry. The barometer had fallen gradually for some days before the earthquake; and the thermometer rose suddenly from 58 to 62½ degrees on the day it happened.

CHAP. II.—OF THE SEA.

THE sea is one of the most important objects of Physical Geography; and seems not less necessary to the existence of man himself, than the solid earth upon which he treads. It absorbs and decomposes the noxious particles of the atmosphere; and if it were dried up, the earth would become as arid and unfruitful as a desert. Its various basins—which, with the exception of the Caspian, all stand in connexion with each other—facilitate the transactions of commerce, and the intercourse of nations; and its productions form a valuable branch of industry in every maritime country.

Bed, Depth, and Level.] The bed or basin of the ocean, being only a continuation of the land, exhibits the same inequalities of surface which continents present.[4] Were the sea dried up, it would present a scene of mountains, valleys, rocks, and plains, covered in some instances with their own peculiar vegetation, and the abode of various species of animals. The depth of the sea varies greatly in different places. The greatest depth ever measured was that ascertained by Mr. Scoresby, the captain of a Greenland whaler, who sunk a very heavy lead in the Greenland Sea, to the depth of nearly 4,700 feet, without finding ground. Our instruments are too weak or imperfect to ascertain greater depths; but it seems probable that in no place does the sea exceed 30,000 feet in depth. La Place, in his *Mechanique Celeste*, has calculated the mean depth of the sea to be 4 leagues from those oscillations of the ocean which involve in their expression the rotation of the earth, and which are affected by the depth of the saline fluid. Where the coast is bold and rocky, we sometimes find an unfathomable sea close to the steepest rocks; but where the shores decline gradually towards the sea, the depth of the sea usually decreases as we approach them. According to the laws of gravitation, by which in all connected bodies of water, the higher parts must flow towards the lower, till they attain the same level, the level of the ocean is, generally speaking, the same everywhere. The only exception to this position may perhaps be found in gulfs and inland seas, which have only a slight communication with the ocean. In general, small portions of sea, open only to the east, have a higher level on account of the accumulation of the waters being driven into these gulfs, as into an alley without an outlet, by that general movement of the sea from E. to W., of which we shall hereafter speak. "There is, perhaps," says Arnot, in his valuable *Elements of Physics*, "nothing which illustrates in a more striking manner the exact accordance of nature's phenomena with the few general expressions or laws which describe them all, than the perfect level of the ocean as a liquid surface. The sea never rises or falls in any place, even one inch, but in obedience to fixed laws, and therefore changes may generally be foreseen and allowed for. For instance, the eastern trade-winds and other causes force the water of the ocean towards the African coast, so as to keep the Red Sea about twenty feet above the general ocean-level; and the Mediterranean Sea is a little below that level, because the evaporation from it is greater than the supply of its rivers, causing it to receive an additional supply from the Strait of Gibraltar; but in all such cases the effect is as constant as the disturbing cause, and therefore can be calculated upon with confidence. Were it not for this perfect exactness, in what a precarious state would the inhabitants exist on the sea-shores, and the banks of low rivers. Few of the inhabitants of London, perhaps, reflect, when standing close by the side of their noble river, and gazing on the rapid flood-tide pouring inland through the bridges, that although sixty miles from the sea, they are placed as low as persons sailing upon its face, where perhaps at the time there may be tossing waves, covered with wrecks and the drowning. The horrible destruction that would follow any alteration in the level of the ocean may be judged of by the effects of occasional floods, produced by rains and melting snow in the interior of

[4] In the second volume of the *Transactions of the Wernerian Natural History Society*, we observe a very interesting map of the bed of the German Ocean by Mr. Stevenson. This is the only map of the kind we have yet seen.

countries, or by these combined with winds and high tides on the coast. The flood at St. Petersburg, in 1825, was dreadful, in which strong westerly winds had retarded the flow of the Neva so much that the water rose forty feet (the height of an ordinary house) above its usual mark, covered all the low parts of the town, and destroyed thousands of human beings. In Holland, which is a low flat, formed chiefly by the mud and sand brought down by the Rhine and neighbouring rivers, much of the country is below the level of the common spring-tides, and is only protected from daily inundations by artificial dikes or ramparts of great strength. What awful uncertainty would hang over the existence of the Dutch if the level of the sea were subject to change: for while we know the water of the ocean to be seventeen miles higher at the equator than at the poles, owing to the centrifugal force of the earth's rotation; were the level, as now established, from any cause, to be suddenly changed but ten feet, millions of human beings would be the victims. Where inundation is regularly periodical, as in the Nile, the hurtful effects can be guarded against, and it may even become useful, by fertilizing the soil. Tracts of land in contact with rivers, and of an elevation between the levels of ebb and flood-tide, may be kept constantly covered with water, by surrounding them with dikes, and opening the sluices at high water only; or they may be kept constantly drained, by opening the sluices only at low water. A vast extent of rice-fields near the mouths of rivers in India and China are managed in this way, the admission or exclusion of water being regulated by the age of the rice-plant.

Colour.] The colour of the ocean is generally of a deep bluish green, particularly in the deeper seas; as the depth diminishes towards the coasts, the water assumes a lighter shade. This apparent colour of the sea may be explained upon the same principle as that of the azure blue of the atmosphere. Both fluids are colourless when in a glass; the air reflects chiefly the most refrangible rays of light, viz. the violet, indigo, and blue, and therefore usually appears of an azure colour, the result of a mixture of these: but the sea, from its density and depth, is able to reflect not only many blue and violet, but also some of the less refrangible rays in sufficient proportion to compose a greenish blue. The other shades in the colour of sea-water depend on illusory or local causes. The green and yellow shades of the sea arise from marine plants; a distinct shade is often communicated to its surface by the presence of myriads of minute insects: and in shallow water, the light reflected from the sand at the bottom often gives a reddish hue to the surface.[5] In the West Indies, where

> "The floor is of sand like the mountain-drift;
> And the pearl-shells spangle the flinty snow,"

the waters of the ocean are often so beautifully transparent, as to exhibit the minutest object they contain or cover at the depth of several fathoms. In the Gulf of Guinea the sea is white; and around the Maldive islands it is black.

[5] Experiments were made during the voyage of the *Coquille*, to ascertain at what depth in the sea an apparatus became invisible, composed of a plank two feet in diameter, painted white, and weighted, so that on descending it should always remain horizontal. The results varied much. At Offale, in the Island of Waigou, on the 13th of September, the disc disappeared at the depth of 59 feet—the weather calm and cloudy; on the 14th the sky being clear, it disappeared at the depth of 75.3 feet. At Port

Phosphorescence.] A very curious and magnificent spectacle is often presented at night by the luminous appearance of the sea,—a phenomenon which seamen generally regard as the precursor of blowing weather. It is of most frequent occurrence in summer and autumn. Forster distinguishes three species of marine phosphorescence. The first is generally seen close to a ship when sailing before a fresh wind, and forms a tail of light in the wake of the ship; at other times, during stormy weather, it spreads over the whole surface of the sea, clothing it apparently in a sheet of fire. This species he ascribes to electricity. The second kind of marine phosphorescence, penetrates beneath the surface; and when a quantity of the illuminated water is put into a vessel, it retains the brilliance as long as it is kept agitated, but loses it as soon as the agitation subsides. This species occurs during dead calms or in very hot weather, and seems to be a true phosphoric light, emanating from particles of putrid animal matter suspended in the water. The third species exceeds the two former in intensity of brilliance; and Forster having attentively examined some of the shining water, expresses his conviction that the appearance is occasioned by innumerable minute animals of a round shape, moving rapidly through the water in all directions, like so many luminous sparks. He imagines that these small gelatinous specks may be the young fry of certain species of some medusæ or blubber. M. Dagilet and M. Rigaud observed several times, and in different parts of the ocean, such luminous appearances attended by vast masses of different animalculæ; and a few days after, the sea was covered near the coasts, with whole banks of small fish in innumerable multitudes, which they supposed had proceeded from the shining animalculæ. But M. le Roi, after giving much attention to this phenomenon, concludes, that it is not occasioned by any shining insects, especially, as, after carefully examining with a microscope some of the luminous points, he found them to have no appearance of an animal; and he also found, that the mixture of a little spirit of wine with water just drawn from the sea, would give the appearance of a great number of little sparks, which would continue visible longer than those in the ocean: the same effect was produced by all the acids, and various other liquids.

Taste and Weight.] When the water of the ocean is subjected to chemical analysis, it appears to be a mixture of fresh water with muriatic acid, sulphuric acid, fixed mineral alkali, magnesia, and sulphated lime. These ingredients are found in sea-water all over the globe, and very nearly in the same proportion to each other: differing only in the total amount of their saline contents. The taste of the ocean is salt and disagreeably bitter; but there is not such a large proportion of common salt present in it as in the water of brine-pits and salt-springs. The quantity of saline ingredients in the waters of the ocean varies from 1-10th to 1-50th part. Mr. Kirwan makes the average quantity about 1-28th. The quantity, however, varies, even in the same latitude, during the rainy and dry seasons, and according to the distance from land and the mouths of great rivers. Near Walloë in Norway, where there is a salt-pit, it has been remarked that the sea-water taken at the surface contains 1-24th of its weight of saline matter at the moment the

Jackson, on the 12th and 13th of February it was not visible at more than 38.3 feet in a dead calm; the mean at New Zealand, in April, was 3.28 feet less; at the isle of Ascension, in January, under favourable circumstances, the extreme limits in eleven experiments were 28 and 38 feet.

ice is detached, which extends thirty feet down; whilst the proportion at every other season is only 1-30th. Upon the coasts of Cumberland there is generally 1-45th of salt in the water of the sea, which is sometimes reduced, by excessive rain, to 1-50th. The temperature of the sea, as remarked by Varennius, will influence its degree of saltness, as heat in general favours the dissolution of saline matter; but the sea is salter at the Poles than at the Equator. The Dead Sea, or Lake Asphaltes, is the saltest accumulation of water on the face of the globe. Lavoisier found it to contain 44.4 per cent. of saline matter, of which 6.25 parts were common salt, and 38.15 were muriated lime and muriated magnesia. A pound of the water of the Baltic contains 2 drachms of salt; and the same quantity between the Tropics nearly 2 ounces. Various theories have been advanced to account for the existence of such a quantity of salt in the water of the ocean. Some assert the existence of vast mines of salt at its bottom. Halley and others have supposed that the sea may have originally received all its saline particles from those existing on the surface of the earth, which were dissolved and carried down to the ocean by the action of rivers and streams. The most probable solution of the matter is, that it is an essential and absolute quality impressed upon it from the creation of the world by the great Author of nature. Its presence, united to the action of the tides and waves, preserves the vast mass of waters from corruption, and at the same time gives it a specific gravity sufficient to float the large bodies which move in it or upon its surface. According to Musschenbroeck, the specific gravity of sea-water is to that of rain-water, as 103 to 100. The peculiarly bitter taste of sea-water is not easily accounted for. Some naturalists suppose it to be occasioned by the quantity of putrid animal and vegetable matter which it holds in solution; Marsigli attributes it to the presence of bitumen; Hales, to that of petroleum; Macquer and the modern chemists, to a distinct principle in its constitution.

Temperature.] The temperature of the globe, in the same latitudes on both sides of the Equator, does not correspond; the southern hemisphere being much colder than the northern. Ice dissolves in the month of May at 80° N. Lat., but exists under 60° S. Lat. all the year, and icebergs are often found in 50° and 48° S. Lat. Saussure estimates the mean temperature of the sea at 53°. Some consider it a good, and others, with more reason, a bad conductor of heat. It has not been satisfactorily ascertained to what depth the sun's rays may penetrate the water of the ocean; the general opinion is, that the light does not reach beyond the depth of 45 fathoms, but that the heat may penetrate a little farther. Peron invented an ingenious instrument, which he called a Thermo-barometer, for ascertaining the temperature of the ocean, and which gave the following results. 1*st.* The temperature of the sea at the surface and shores is less at mid-day than that of the atmosphere in the shade; it is greater at midnight; and in the morning and evening the temperatures of the ocean and the atmosphere are in equilibrium. 2*d.* The temperature increases as we approach islands or continents. 3*d.* Near the shores the temperature at the bottom of the ocean is generally less than that of the surface, and the cold increases with the depth. Hence he concludes, that the greatest depths of the sea may present masses of solid ice, analogous to those which crown the summits of the loftiest mountains. Humboldt differs totally in opinion as to the change of temperature in the water of the ocean on approaching the shore, which, he says, he has

always found 2 or 3 degrees colder than in the deep seas; and although in Baffin's Bay, the Mediterranean, and the Tropical seas, the temperature of the sea diminishes with its depth; it is a remarkable fact, that in the Arctic, or Greenland seas, the temperature increases with the depth. The greatest difference noticed by Captain Parry was a temperature of 6° above that of the upper strata of water at the depth of 246 fathoms; and Captain Sabine observed a difference of 7½° at the depth of 680 fathoms. During violent storms the temperature of the sea is said to exceed that of the atmosphere; but all observations hitherto made show a range of temperature within the limits of 26° and 68° of Fahrenheit. In general we may observe, that the temperature at sea does not equal that on shore in the same latitude. The immense plain of the ocean opposes no obstacle to the free circulation of the air, neither does it reflect the rays of the sun. The movements of the waves, tides, and currents, and the constant process of evaporation, keep the lower strata of air on the surface of the ocean in perpetual agitation, and consequently prevent that accumulation of heat which takes place at the surface of the land.

Marine Ice.] It was long disputed among the learned whether the waters of the ocean are capable of being congealed. Observation and experiment have now settled this question. At 50° we find ice forming under certain temperatures on the edges of the sea; at 60° N. Lat. the gulfs and interior seas are frozen over their whole surface during the winter-season; at 70° the sea appears almost covered with floating fields of ice;[6] and towards the 80th degree they become stationary, and wedged together so as to present the appearance of a continuous frozen plain. Marine ice is porous, incompact, and imperfectly diaphanous. It consists of specular shoots, or thin flakes, which detain within their interstices the stronger brine; and its granular spongy texture has the appearance of congealed syrup, or what the confectioners call *water-ice.*[7] Professor Leslie, in an article on Polar Ice, in the 30th volume of the *Edinburgh Review*, remarks, that "to congeal sea-water of the ordinary saltness, or containing nearly 1-30th part of its weight of saline matter, requires not an extreme cold: this process taking effect about the 27th degree on Fahrenheit's scale, or only 5 degrees below the freezing point of fresh-water, within the Arctic circle, therefore, the surface of the ocean being never much warmer, is, in the decline of the summer, soon

[6] In the southern hemisphere, in Lat. 74°, Captain Tweedale found an open sea.

[7] The whale-fishers enumerate several varieties of the salt-water ice. A very wide expanse of it, they call a *field*, and one of smaller dimensions, a *floe*. When a field is dissevered by a subaqueous or *ground* swell, it breaks into numerous pieces, seldom exceeding forty or fifty yards in diameter, which, taken collectively, are termed a *pack*. This pack again, when of a broad shape, is called a *patch*; and, when much elongated, a *stream*. The packs of ice are crowded and heaped together by violent winds; but they again separate and spread asunder in calm weather. If a ship can sail freely through the floating pieces of ice, it is called *drift-ice*; and the ice itself is said to be *loose* or *open*. When, from the effect of abrasion, the larger blocks of ice are crumbled into minute fragments, this collection is called *brash-ice*. A portion of ice, rising above the common level, is termed a *hummock*, being produced by the squeezing of one piece over another. These hummocks or protuberances break the uniform surface of the ice, and give it a most diversified and fantastic appearance. They are numerous in the heavy packs, and along the edges of ice-fields, reaching to the height of thirty feet. The term *sludge* is applied by the sailors to the soft and incoherent crystals which the frost forms when it first attacks the ruffled surface of the ocean. As these increase, they have some effect, like oil, to still the secondary waves; but they are prevented from coalescing into a continuous sheet, by the agitation which still prevails; and they form small discs, rounded by continual attrition, and scarcely three inches in diameter, called *pancakes*. Sometimes these again unite into circular pieces, perhaps a foot thick, and many yards in circumference.

cooled down to the limit at which congelation commences. About the end of July, or the beginning of August, a sheet of ice in the space of a single night is formed, perhaps an inch thick. The frost now maintains ascendency, and shoots its increasing energy in all directions, till it has covered the whole extent of these seas with a solid vault to the depth of several feet. But, on the return of spring, the penetrating rays of the sun gradually melt or soften the icy floor, and render its substance friable and easily disrupted. The first strong wind creating a swell in the ocean, thus breaks up the vast continent into large fields, which are afterwards shivered into fragments by their mutual collision. This generally happens early in the month of June; and a few weeks are commonly sufficient to disperse and dissolve the floating ice. The sea is at last open, for a short and dubious interval, to the pursuits of the adventurous mariner."

Icebergs.] Mr. Laing gives the following account of the floating masses of ice so frequently met with in the Arctic Sea:—"These floating mountains of ice, to which Dutch navigators have given the name of icebergs *(issbergs)*, and which are all of different magnitudes, are originally formed on land. The sun, even in those latitudes, has a considerable power in melting the snow on the mountains, which running down into the vallies, and again congealing, segments frequently break off from the entire mass, and fall into the sea. The ice, of which these floating masses are composed, is of various colours. The original fresh water ice is sometimes incrusted with that formed from the sea-water, and this again is covered with new ice formed of fallen snow. The different positions of the spectator relatively to the incidental rays of light varies likewise the seeming hue of the whole. In some parts it emulates the vividness of the emerald, and in others the most beautiful sapphire. When the iceberg is totally composed of melted snow—which is sometimes but partially the case—the refraction of the solar rays is most beautiful; and the appearance of those floating mountains, on the side opposite the sun, presents such a blaze of light, intermingled with different glowing tints, as totally to baffle description." "Frost," says the eloquent Pennant, "sports with these icebergs, and gives them majestic as well as other singular forms. Masses have been seen assuming the shape of a Gothic church, with arched windows and doors, and all the rich drapery of that style, composed of what an Arabian tale would scarcely dare to relate, of crystal, of the richest sapphirine blue; tables with one or more feet; and often flat-roofed temples, like those of Luxor on the Nile, supported by transparent columns of cerulean hue, float by the astonished spectator. I have not unfrequently seen floating masses of ice which had evidently been formed of drifted snow, since they wanted the compactness and solidity of those formed by the melting of the snow. Many of these contained trees, and (as there are no trees in Spitzbergen) must have been originally formed in the northern parts of Russia or America, and being carried by the rapid rivers of these countries into the ocean, had drifted into these latitudes. These trees have often the appearance of being burnt at the ends; and Olafsen mentions, that the violent friction which they frequently experience, occasionally sets them on fire, and exhibits the extraordinary phenomenon of flame and smoke issuing from this frozen ocean." Mr. O'Reilly informs us, that on those immense masses there are sometimes found large lakes of fresh water formed by the action of the sun upon their summits, and from the snow with which they are generally covered. On days when the state of the

atmosphere is favourable to evaporation, these *bergs* are capped with a little fog, like a mountain-peak. Sometimes the evaporation is so great as to envelope the ice-island altogether, and render it invisible, at which time it is certain destruction for a ship to come to windward of it; for the tremendous chance is that she may come foul of it, a fate infinitely worse than were the vessel to encounter a rock. Unless a favourable wind, or the providential set of tide, aid in moving her from this formidable associate, the ship is in immediate danger of being buried beneath the ruins of the icy mountain, which are constantly tumbling from a height above the elevation of the mast, or the constant indraught against its sharp edges dashes her to pieces. In this awful emergency, the men are active in taking to their boats, without consideration of any thing but to save their lives. One half the vessels that are every year lost in the fisheries are owing to accidents of this kind, whence it is one of the great concerns of the watch upon deck to look out sharply for fear of falling in with an iceberg. A violent wind often upsets such as become top-heavy from the waves lessening their bulk below. During the presence of a perpetual sun, the influence of that luminary is exercised with extraordinary force upon the icy continent, and causes those immense masses to be rent asunder from the continent, whence they are precipitated into the sea, and commence their progress to the southward. Carried thither by the tide-stream, and under the force of a strong wind, they move along usually at the rate of two miles an hour, sometimes impelling before them fields of ice whole leagues in extent. In their way to the southward these *bergs* break with a similar report, and finally fall into small pieces, and form streams of ice, which the sailors distinguish by their glassy blue colour to contain fresh water, and from them often collect a quantity for supply."

Motion of the Sea.] The sea is subject to various motions, arising from different causes. Even when unruffled by the winds, it is agitated by the rotation of the earth, and the attraction of the moon and the sun. These three causes produce a threefold motion, viz. the motion of the *waves*, that of the *currents*, and that of the *tides*. The motions of the waves are produced by the winds. When, from the impulse of the wind, the sea loses its equilibrium, an undulating motion is produced; the part immediately acted upon by the wind rises above the one succeeding it, which is then pressed down, and an elevation or wave of greater or less height is produced, but which, on account of its own weight, sinks directly again, and thus pressing upon the part nearest to it, forces it to rise. An alternate rising and falling of the water is thus produced, though not, as some might suppose, an advancing motion towards any particular quarter. The agitation of the ocean during the most violent storm never reaches a greater depth than 15 fathoms.

Tides.] The most wonderful and important motion of the sea is that of *high* and *low tide*, or that regular ebb and flow of the sea which occur every day at a certain interval. The sea rises to its greatest height in about 6 hours, and remains stationary for about 6 minutes; after which it recedes for other 6 hours, and having remained stationary at its lowest tide for a few minutes, begins to rise again. High and low tide thus last six hours alternately; and the total period of a flux and reflux of the sea being 12 hours and 50 minutes,—the tides return 50, or, according to sailors' calculation, 48 minutes later each day. The earth, by its rotatory motion, successively presents to the moon, in the space of 24 hours, all its meridians, which consequently are found by turns, and at an interval

of 6 hours, sometimes under the moon, and sometimes at a distance of 90 degrees from it; and high tide always happens two or three hours after the moon has passed the meridian of the given place, above or below the horizon.[8] The tide is strongest at new or full moon. In the open sea, the water rises only from one to three feet; but in the narrower parts it rises from ten to fifty feet. In the Baltic and the Black Sea there is no tide; and almost none in the Mediterranean.[9] The influence of the moon excited upon the mass of waters in the Atlantic, causes them to flow to the western coast, where Ireland presents a barrier, and divides the Atlantic tide into two great streams. One flows round the north of Scotland, and sets in southward into the German Ocean with great rapidity, where it encounters the southern tide along the English Channel, and hence the great swell about the Straits of Dover. The interruption to the southern tide also occasions its greater slowness, so that a second tide from the Atlantic, down the German Ocean, meets it, and thus we find a strong swell about the Nore at the spring-tides. The connexion between the motion of the sea and the position of the moon was early observed by philosophers. Pythias, Pliny, Ptolemy, and Macrobius, mention the influence of the sun and moon upon the tides. Among the moderns, Galileo, Descartes, Kepler, Newton, and others, have offered hypotheses upon this subject; and the succeeding observations of Bernoulli, Euler, and La Place, have proved that these oscillations of the sea are of three kinds, viz. those which depend solely on the motion of the sun and moon in their respective orbits, and on the place of the moon's nodes; those which depend principally on the rotation of the globe; and those which depend on an angle which is double the angular rotation of the earth. The first class vary periodically, but slowly, so that they do not return in the same order till after a very long period of time. The second class return in the same order after the interval of a day nearly. The third class return after the interval of nearly half a day. Each of these classes of oscillations proceed just as if the other two had no existence.

Currents.] Besides these motions of the ocean, there is another not so easily accounted for. There is felt in the open sea between the Tropics, and as far as the 30th degree of latitude, a constant motion from E. to W., which manifests itself in the quick sailing of vessels moving in that direction. Navigators, in order to go from Europe to America, are obliged to descend to the latitude of the Canary islands, in order to catch the current which carries them with rapidity to the west. They observe the same rule in going from America to Asia by the Pacific Ocean. In the hot zones this phenomenon may perhaps be accounted for by the fact of the east wind blowing constantly in that region. Winds which are uniform and permanent may produce, by protrasion, currents in the ocean in like manner permanent and uniform; but some naturalists attempt to explain this phenomenon upon the principle of

[8] The earth in revolving upon its axis, carries along with it, to the eastward of the moon, the promontories or the most elevated particles of water; these will still continue, therefore, to rise by the action of the moon; and although that action, already less direct, is diminishing in force every moment, yet it subsists and continues to combat with the inertia and friction which retard the elevation. It is for this reason, that the elevation does not attain its *maximum* at the very moment of the moon passing the meridian. The greatest *spring-tides*, also, do not happen till the second or third day after the new or full moon; and a similar observation is to be made with respect to the *neap-tides*.

[9] On the open shores of the Mediterranean, the elevation and greatest depression of the sea, is about two feet in calm weather.

the theory of the tides. The most celebrated of these currents is the *Gulf-stream*, which rises in the Gulf of Mexico, between Florida and the Bahama islands, and sets in a bended and expanded flow north-easterly, along the coasts of North America, till it reaches Norway, whence repulsed by the Scandinavian coasts, it turns N.W. towards Greenland. This current is known by the beautiful blue colour of its waters. It is said that there exists a constant under-current of the sea from the poles to the equator, which Rumford explains on the principle that water deprived of its heat by cold winds, descends to the bottom of the sea, where it immediately begins to spread out, and so flow towards the equator. This motion necessarily produces a current at the surface, in an opposite direction; and the action of these currents, conjoined with that of the gulf-stream, is a powerful agent in clearing the North Sea of those accumulating fragments of ice which would otherwise choke it up.

Whirlpools.] When two or several currents meet each other, or cross at angles, violent circular motions of the sea are produced, which attract every thing coming within their vortex, and whirling it round in decreasing gyrations, finally ingulf it in their bosoms. These motions of the sea are called *whirlpools*. Some naturalists believe that they mark the situation of profound abysses in the bottom of the sea, into which the water precipitating itself produces this dangerous suction. Among the most remarkable whirlpools is that of Chalcis in the Euripus, near the coast of Greece, which alternately absorbs and rejects the water seven times every twenty-four hours. Charybdis, near the Strait of Sicily, rejects and absorbs the water thrice in twenty-four hours. The largest known whirlpool is the *Maelstrom* in the Norwegian Sea, the circumference of which exceeds 20 leagues.

CHAP. III.—OF THE ATMOSPHERE.

The atmosphere, or 'sphere of vapours,' is that invisible elastic fluid which surrounds the earth to an unknown height, turning with it around its axis, and moving with it in its orbit around the sun. This fluid is essential to the existence of all animal and vegetable life. Without it no organized being could exist, and there would be neither rain nor refreshing dews to moisten the face of the ground; it decomposes the mephitic vapours which are perpetually exhaling from the earth; and is the grand agent which, by tempering the extremes of heat and cold, renders every clime habitable to man. Nature, indeed, and the constitution and principles of matter, would be totally changed if this fluid were wanting. The knowledge of the component parts of the atmosphere is among the discoveries of the moderns. The opinions of the earlier chemists are too vague to merit any particular notice. Boyle, however, and his contemporaries, put it beyond doubt that the atmosphere contains two distinct substances: viz. an elastic fluid, distinguished by the name of *air*, the most rarefied and fluid of all known bodies, and water in the state of vapour. The constituent parts of the atmosphere are, according to Dr. Murray:

	By Measure.	By Weight.
Nitrogen gas, or impure air, .	77.5 . .	75.55
Oxygen gas, or pure air, . .	21.0 . .	23.32
Aqueous vapour, . . .	1.42 . .	1.03
Carbonic acid gas, . . .	08 . .	.10

It has been imagined, that a portion of hydrogen gas may exist in the atmospheric air; but in the usual analysis of it, oxygen is abstracted, and the residual air is found to be nitrogen. The nitrogen is probably not perfectly pure: perhaps a small portion of hydrogen is mixed with it in the highest regions of the atmosphere, where meteors are common.

Height of the Atmosphere.] The height of the atmosphere above the surface of the earth cannot be determined with exactitude. Klügel calculates it at 26, Frisi at nearly 81, and Dr. Wollaston at 27 English miles. From the duration of the twilight—by which however we can only take into our calculation that part of the atmosphere beneath the point where the air becomes so rarefied as to be incapable of reflecting the rays of light—the height of the atmosphere has been estimated at, from 32 to 40 miles. But this height is not equal in all places and at all times.

Weight of the Atmosphere, Barometer.] Galileo has demonstrated the weight of air, by the difference of weight between two vases which were filled, the one with compressed air, the other with air in its natural state. With respect to the changes in the weight of the atmosphere, it is generally known, that the instrument called the *barometer*, shows the weight of a column of air immediately above it, extending to the extreme boundary of the atmosphere, and the base of which is equal to that of the mercurial column. As the level of the sea is the lowest point of observation, the column of air over a barometer, placed at that level, is the longest we can obtain; and in this case, as the mean height of the barometer is 30 inches, it follows that the whole atmosphere is equal in weight to a sheet of mercury 30 inches deep, or to a sheet of water 34 feet deep, or to a globe of lead 60 miles in diameter; and the pressure which it exerts on an ordinary sized man, the surface of whose body amounts to 1.5 square feet, will be 32,505 pounds. The mean height of the barometer decreases according to its elevation above the level of the sea, or in proportion to the consequent decrease in length of the columns of air; hence it is used for measuring heights. The keeping of a barometer, however, in one particular place, does not make the mercury stationary, as it will vary to the extent of several inches in the course of a year; this circumstance proves that the gravity of the air in any situation, varies greatly. The variations of the barometer between the tropics are very trifling, and it is worthy of observation, it does not descend more than half as much in that part of the globe, for every 200 feet of elevation, as it does beyond the tropics; besides, the barometer rises about two-thirds of a line twice during each day in the torrid zone. The range of the barometer increases gradually as the latitude advances towards the poles, till it amounts to two or three inches.[10] The range of the barometer is

[10] The following table will explain the gradual increase alluded to: it is compiled from the best authorities.

Latitude.	*Places.*	RANGE OF THE BAROMETER.	
		Greatest.	*Annual.*
0° 0′	Peru,	0.20	——
22° 23′	Calcutta,	0.77	——
33° 55′	Cape Town,	——	0.89
40° 55′	Naples,	1.00	——
51° 8′	Dover,	2.47	1.80
53° 13′	Middlewick,	3.00	1.94
53° 23′	Liverpool,	2.89	1.96
59° 56′	Petersburg,	3.45	2.77

considerably less in North America, than in the corresponding latitudes of Europe; particularly in Virginia, where it never exceeds 1. 1. The range is more considerable at the level of the sea than on mountains, and in the same degree of latitude, it is in the inverse ratio of the height of the place above the level of the sea. It is greater in winter than in summer; for instance, the mean at York, during the months from October to March, inclusive, in the year 1774, was 1.42, and in the six summer-months, 1.016. The more serene and settled the weather is, the higher the barometer ranges; calm weather, with a tendency to rain, depresses it; high winds have a similar effect on it; and the greatest elevation occurs with easterly and northerly winds; but the south wind produces a directly contrary effect. According to the *Asiatic Researches*, it is always observed to be highest with N. and N.W. winds, and the reverse when the S.E. prevails: it falls rapidly previous to violent tempests, and is greatly agitated while they continue.[11]

Evaporation.] There is a perpetual development of invisible aeriform bodies, carrying on at all times from land and water, plants and animals, at the surface of our globe. These ascend into the atmosphere under the form of vapours and exhalations, and thus introduce into it a variety of foreign particles which greatly affect its salubrity and phenomena.[12] This perpetual evaporation produces a constant series of attractive and repulsive motions in the atmosphere, accompanied with absorption and exhalation, composition and decomposition, some of the effects of which chemical processes are perceived by us in meteors and other aerial phenomena, though the greater part remain yet unknown to us. The greater part of these ascending particles are of an aqueous nature, and the waters on the surface of the globe and all other bodies containing watery particles, contribute to these vapours.

Evaporation is not a process of solution in air, neither is it probable that the water is decomposed by it. It is the same process in the great laboratory of nature, as in a small quantity of water placed over the fire. Vapour is formed and diffused in all directions from its source, with a force proportioned to the temperature of the water, and subject to the opposing force of the vapour already in the air. Evaporation is consequently much stronger in the torrid than in the cold regions; but even the ice of the poles cannot entirely check it. When we consider that 6,914 tons are daily exhaled from a square mile of water, and about thirty-five cubic inches from every man, we may form some idea of the quantity of aqueous vapours suspended in the air. So long as these

[11] In the supplement to the *Encyclopædia Britannica*, Professor Leslie has proposed a theory of the depression of the barometer, in which he supposes that the wind, describing a curve in passing over the surface of the globe, acquires a centrifugal force sufficient to diminish the pressure of the air on the earth's surface, and consequently to depress the barometer. Mr. Daniell, in his *Meteorological Essays*, has endeavoured to controvert this theory. A writer in *Jamieson's Edinburgh Journal* remarks that the curvilinear motion of the wind, describing a circle about the earth, in place of always lowering the barometer, ought frequently to augment the pressure of the atmosphere, because when the wind is from the E., the diurnal motion round the earth's axis is lessened, and its centrifugal force weakened; and so the air will be at more liberty to gravitate or press freely on the earth's surface, and consequently to raise the barometer. Westerly winds, on the contrary, by crossing with the diurnal motion, increase the centrifugal force and diminish the pressure. Hence the reason why the barometer is commonly lower with westerly winds than easterly.

[12] Thus azotic and carbonic gases are abundantly disengaged from many rocks and earths; and the air is impregnated with an immense quantity of vapours from numerous plants. The evaporation from the *helianthus annuus*, is 47 times greater than that from an equal extent of the surface of the human body.

vapours are held in a state of intimate union with the air, they do not affect its transparency, and are themselves invisible. But as soon as the air is fully saturated with them, and the vapours, which do not cease to ascend, are not dissolved, or when these which have been already dissolved are by any cause again congregated, they then become visible on account of their opacity, and partly hover over the surface of the earth as *mists*, and partly remain at a greater or less elevation in the atmosphere as *clouds*.[13] Even on Chimborazo, the loftiest mountain of the Andes, there are always to be seen at an immense height, certain whitish clouds resembling flakes of wool. These are called *sheep*, and their height is estimated by Bouguer, at 25,000 feet. Mr. Dallon in his Meteorological Essays says, that by some careful observations he has found 'the small white streaks of condensed vapour which appear on the surface of the sky, to be from 3 to 5 miles above the earth's surface; such clouds are the lightest shapes in which condensed vapour can appear, and it has been long supposed that the atmosphere becomes so rarefied at the height of 4 miles, that no clouds can be found in it or sustained by it.

Precipitation.] The air returns to the earth, in the form of aqueous meteors, and by precipitation, what it has raised from its surface by evaporation. These meteors are dew, mist, rain, snow, and hail.

Dew.] The dew is partly perhaps an evaporation from the plants, and partly a real precipitation from the atmosphere. It is seen in extremely small and distinct globules, covering the surface of the ground with a trembling and brilliant lustre. As dew generally occurs when a cold night succeeds to a warm day, it is most plentiful in the warmer regions of the earth, and even in some countries compensates for the want of rain. According to Hales, 3.28 inches of dew annually falls on the earth; but Dalton asserts that the quantity is about 5 inches in the same period. In some regions it is extremely prejudicial to the health of man, and even to plants; in others it is mild and beneficial. When dew falls upon bodies of a colder temperature, it instantly freezes, and forms what is called *hoar frost*. *Mildew* and *honey dew* are not of atmospheric origin.

Mists.] Mists which are distinguished from clouds by nothing but their relative place in the atmosphere, are rare in the warmer countries, and increase towards the poles, in the neighbourhood of which they almost constantly occur. A certain degree of cold is necessary to their production, and they either vanish before a warm sun, or rise higher into the air as clouds. However mists are observed even during the day in the torrid zone. According to Sir H. Davy, land and water are cooled after sunset in a very different manner. The impression of cooling on the land is limited to the surface, and is very slowly transmitted into the interior; whereas in water, the upper stratum, when cooled, descends and has its place supplied by warmer water from below. The surface of the water will therefore, in calm and clear weather, and in temperature above 50° Fahrenheit, be warmer than that of the contiguous land; and consequently the air above the land will be cooler than that above the water. When the cold air, therefore, from the land mixes with that above the water, both of them containing their due proportion of aqueous vapour, a mist or fog must be the result.

[13] Deluc has been led by his observations on the mountains, to propose a new theory of rain, which is entirely opposed to that which considers the vapours as dissolved in the atmosphere. He believes that the aqueous vapours are decomposed into gases, and that these gases being again decomposed produce the clouds and rain.

Rain.] Rain never descends till the transparency of the air ceases, and the invisible vapours become vesicular, when clouds form, and at length the drops fall. In the torrid zone the rain-drops are sometimes an inch in diameter; in the temperate zone the drops seldom exceed a few lines in diameter. Clouds, instead of forming gradually at once throughout all parts of the horizon, generate in a particular spot, and imperceptibly increase till the whole expanse is obscured. It is singular that clouds collect and spread at a considerable height in the atmosphere, where the air is drier than in the lower strata, which are generally overcharged with moisture. It is equally remarkable, says a late writer, "that the part of the atmosphere at which they form, has not arrived at the point of extreme moisture, nor near that point, even a moment before their formation." The quantity of rain taken at an annual mean, is greatest at the equator, and lessens gradually to the poles: but there are fewer days of rain there, the number increasing in proportion to the distance from the equator. The *Journal de Physique* contains the following observations: "From north latitude 12° to 43°, the mean number of rainy days is 78; from 43° to 46°, the mean is 103; from 46° to 50°, 134; and from 51° to 60°, 161." Winter often produces a greater number of rainy days than summer, though the quantity of rain is more considerable in the latter than in the former season; at Petersburg rain and snow fall on an average 84 days of the winter, and the quantity amounts to about 5 inches; on the contrary, the summer produces 11 inches in about the same number of days. Mountainous districts are subject to great falls of rain; among the Andes, particularly, it rains almost incessantly, while the Sahara of Africa, and the low coasts of Caraccas, are consumed by endless drought. In the year 553 it rained violently in Scotland for 5 months; and in 918 there was a continual rain in that country for 5 months. A violent rain fell in London in 1222; and England was again visited by a rain in 1233, so violent that the harvest did not begin till Michaelmas. From midsummer to Christmas 1338, there was not one day or night dry together. In Wales, 10,000 sheep were destroyed by rain, in September 19, 1752; in Languedoc, the village of Bar le Duc was flooded away by rain, April 26, 1776; and in the island of Cuba, on the 21st June, 1791, 3000 persons, and 11,700 cattle of various kinds, perished by the torrents occasioned by the rains. M. Toaldo seems to think that a greater quantity descends in the night than in the day, and it is certain that a south wind produces more rain than any others, though it falls during the prevalence of every wind; heavy falls also occur in the most complete calms. M. Cotte published a paper in the *Journal de Physique*, from which it appears that the mean quantity of rain descending at 147 places, between latitude 11° and 60° north, is 34.7 inches. "Let us suppose then," observes Dr. Thomson,—"which cannot be very far from the truth, the mean annual quantity of rain, for the whole globe, is 34 inches. The superficies of the globe consists of 170,981,012 square miles, or 686,401,498,471,475,200 square inches; the quantity of rain, therefore, falling annually, will amount to 23,337,650,812,030,156,800 cubic inches, or somewhat more than 91,750 cubic miles of water." There are 52,745,253 square miles of dry land on the globe; consequently, the annual amount of the quantity of rain descending upon it, will be 30,960 cubic miles. The sea is supposed to receive 13,140 cubic miles of water, which flows into it annually; therefore it must supply an equal quantity by evaporation, or the land would be completely drained of every

particle of moisture." Mr. Dalton estimates the quantity of rain falling in England, at 31 inches.

Snow.] When the rain-drops at the moment of formation are crystallized by the cold they form snow, and, under certain circumstances yet unknown to us, assume the form of hail. Judging from appearances only, it might be imagined that the cold humidity of snow, so far from being useful to the earth, would be detrimental to vegetation. The contrary, however, is the result. Snow, particularly in those northern regions where the ground is covered with it for several months, fructifies the earth, by guarding the corn and other vegetables from the intenser cold of the air, and especially from the cold piercing winds. It has been a vulgar opinion, very generally received, that snow fertilizes the land on which it falls more than rain, in consequence of the nitrous salts which it is supposed to acquire by freezing. But it appears from the experiments of Margraaff, in the year 1731, that the chemical difference between rain and snow-water is exceedingly small; that the latter contains a somewhat less proportion of earth than the former, but neither of them contain either earth or any kind of salt, in any quantity which can be sensibly efficacious in promoting vegetation. The red-snow which is sometimes found, seems to owe its colour to the presence of oxide of iron, in a state of minute division, and a resinous vegetable principle of an orange-red colour, belonging apparently to some alga or lichen, of which too the iron may form one of the immediate principles. The colouring matter penetrates from one inch to twelve feet, and appears in the form of minute globules from 1-1000th to 1-3000th of an inch in diameter.

Hail.] According to all appearances, hail is a species of snow, or of congealed rain. M. Delcross has observed that hail consists of spherical pyramids, or fragments of spheres, which have been broken by some explosion, and the sleuwages of which always pass through the centre of the sphere. And he conceives that he observed the original sphere during the dreadful storm at Baçonniere, on the 4th July 1819, where some of the spherical hailstones were 15 inches in circumference. All the great falls of hail have been attended by thunder and lightning, so that it is highly probable it may in some degree be the produce of electrical agency; and in fact, by an electrical apparatus, we can produce hail. In Italy, in 1210, there fell a shower of hailstones of enormous size, some of them weighing an hundred pounds. It was attended with a strong smell of sulphur, and the stones were of a bluish colour. Another fell at Lisle, in 1736; the stones were of a large size, and some of them in the middle contained a brown substance which exploded in the fire. On the 29th of April, 1697, a large black cloud from Caernarvonshire, passed over Cheshire and Lancashire, which threw down hailstones of half-a-pound weight. Its tract was sixty miles in length, and two in width. In the same year, a shower fell in Hertfordshire, wherein were stones of 14 inches in circumference, which killed several persons. There are also records of masses of ice which have been precipitated from the atmosphere, or thrown down by waterspouts. Sudden hail-storms frequently ravage the vineyards on the Continent in the course of a serene or even sultry day.

Halo and Parhelion.] Exclusive of the general appearance of vapour when condensed into clouds, there are other forms in which the existence of moisture in the atmosphere is observable, particularly the *halo*, a luminous circle appearing under certain circumstances round the sun, moon, and stars. This has been ascribed to the rays of light issuing

from those bodies, passing through a medium of cirrostratus clouds. The *parhelion*, or false sun, is another phenomenon effected by the rays of the sun darting upon frozen or fluid particles of water, on either side of that body. On the 4th of February last, a magnificent instance of this phenomenon was observed at Kiathka, in Siberia. At sunrise, the cold being extremely severe, luminous rays, known in Siberia by the name of the sun's *ears*, were perceived on both sides of that orb. At ten o'clock in the morning these rays changed into brilliant parhelions. An immense whitish column, similar to a comet's tail, issued from the sun, which had already risen to a great elevation, and took the direction of the west; and there was formed throughout the whole extent of the heavens, a regular circle, at the circumference of which were seen seven images of the sun, pale and without rays, situated at an equal distance from the real sun, and from each other. The sun, moreover, reflected in the atmosphere four large white circles, disposed so as to form a pyramid, and of which two were circumscribed in the above-mentioned circle, whilst the other two were in the part of the horizon opposite to the sun. It was remarkable that there should have been four circles in the large one; but one of them was effaced by the brightness of the sun, and of another only half could be seen, resplendent with the colours of the rainbow. It is to be regretted that this phenomenon, which continued till nearly noon, was not observed by astronomers. There are also *paraselenas* or false moons.

Rainbow.] The rainbow has a near affinity to parhelions, being like them 'an airy child of vapour and the sun.' Every one knows that this spacious arch, with all its gorgeous colouring, is the effect of the sunbeams refracted in drops of water suspended in the air, and reflected upon a dark cloud. Dr. Watt of Glasgow, indeed, in an article in the *Annals of Philosophy* for February 1819, maintained that the rainbow was not produced from rain, being nothing more than a spectrum produced by the refraction of the edge of a cloud, which must always disappear when the sun emerges from behind this prism; but Dr. Brewster has most satisfactorily demonstrated that the light of the rainbow is actually polarized light, in consequence of its having suffered reflection nearly at the polarizing angle, from the posterior surface of the drops of water; and such a change upon its light could not possibly have been effected by passing through any prism whatever. Lunar rainbows have been frequently observed, particularly in the vicinity of Matlock, in Derbyshire. The colours of these latter phenomena are much less vivid than those which originate in the solar rays.

The Mirage.] One of the most remarkable of optical illusions is the *mirage*, or appearance of objects which are not actually in the horizon. In the sandy deserts of the East, this phenomenon often torments the parched and exhausted traveller, by presenting the appearance of a beautiful lake, reflecting trees and shrubs and cities, where there actually exists nothing but a plain of arid sand. The mirage has given origin to many wonderful tales, such as the German one of the Spectre of the Brocken, and the terrific phantoms of Soutra Fell in Cumberland. In the Straits of Messina, it is known by the name of *fata morgana*, the common people attributing it to the fairy Morgana. The Sicilians call it the most beautiful sight in nature. Minai has written a dissertation on this phenomenon, which is thus described by Father Angelucci: "On the 15th of August, as I stood at my window, I was surprised with a

wonderful vision. The sea that washes the Sicilian shore, swelled up, and became, for ten miles in length, like a chain of dark mountains; while the waters near our Calabrian coast grew quite smooth, or in an instant appeared as one clear polished mirror, reclining against the ridge. On this glass was depicted, in chiaroscuro, a string of several thousand pilasters, all equal in altitude, distance, and degree of light and shade. In a moment they lost their height, and bent into arcades like Roman aqueducts; and a long cornice was next formed on the top, and above it rose castles innumerable, all perfectly alike. They soon split into towers, which were shortly after lost in colonnades, then windows, and at last ended in pines, cypresses, and other trees, even and similar. This is the *fata morgana* which for twenty-six years I thought a mere fable." A very interesting optical illusion was observed by the officers on the late expedition to Baffin's Bay. Upon looking at the summits of distant mountains, they were surprised to observe a huge opening in them, as if they had been perforated, or an arch thrown from one to another. This effect arose from the apparent junction of the tops of the mountains, produced by a variation of density in some part of the atmosphere, between a shower then falling and the tops of the mountains, but which did not exist at a lower level, so as to affect the inferior parts of the mountains.

Meteors.] Besides the meteorological phenomena we have now described, there is another class of inflammable, or at least phosphorescent appearances. The inflammable meteors are mostly of electric origin; and of these, lightning and thunder are at once the most sublime, terrific, and beneficial to man.

Lightning.] That lightning is really an electrical phenomenon, is now universally admitted. Philosophers had not proceeded far in their experiments and inquiries on this subject, before they perceived the obvious analogy between lightning and electricity. But this hypothesis was first placed beyond a doubt by Dr. Franklin, who, about the close of the year 1749, conceived the practicability of drawing lightning down from the clouds. Various circumstances of resemblance between lightning and electricity were remarked by this philosopher, and have been abundantly confirmed by later discoveries. Such are the following: Flashes of lightning are usually seen crooked and waving in the air; so the electric spark drawn by a regular body at some distance, and when it is drawn by an irregular body, or through a space in which the best conductors are disposed in an irregular manner, always exhibits the same appearance. Lightning strikes the highest and most pointed objects in its course, in preference to others, as hills, trees, spires, and masts of ships; so all pointed conductors receive and throw off the electric fluid more readily than those that are terminated by flat surfaces. Lightning is observed to take and follow the readiest and best conductor; and the same is the case with electricity, in the discharge of the Leyden phial; from whence the Doctor infers, that in a thunder-storm, it would be safer to have one's clothes wet than dry. Lightning burns, dissolves metals, rends some bodies, sometimes strikes persons blind, destroys animal life, deprives magnets of their virtue, or reverses their poles; and all these are well-known properties of electricity. To demonstrate, however, by actual experiments, the identity of the electric fluid with the matter of lightning, Dr. Franklin contrived to bring lightning from the heavens, by means of a paper kite, properly fitted up for the purpose,

with a long fine wire string, which he raised when a thunder-storm was perceived to be coming on; and with the electricity thus obtained, he charged phials, kindled spirits, and performed all other such electrical experiments, as are usually exhibited by an excited glass globe or cylinder. By a number of experiments, Mr. Canton soon after observed that some clouds were in a positive, while some were in a negative state of electricity; and that the electricity of his conductor would sometimes change from one state to the other, five or six times in less than half-an-hour. How it happens that particular parts of the earth, or the clouds, come into the opposite states of positive and negative electricity, is a question not absolutely determined; though it is easy to conceive that when particular clouds, or different parts of the earth, possess opposite electricities, a discharge will take place within a certain distance; or the one will strike into the other, and in the discharge a flash of lightning will be seen. Mr. Canton inquires whether clouds do not become possessed of electricity by the gradual heating and cooling of the air; and whether air suddenly rarefied, may not give electric fire to clouds and vapours passing through it, and air suddenly condensed receive electric fire from them. Mr. Wilcke supposes, that the air contracts its electricity in the same manner that sulphur and other substances do, when they are heated and cooled in contact with various bodies. Thus, the air being heated or cooled near the earth, gives electricity to the earth, or receives it from it; and the electrified air being conveyed upwards by various means, communicates its electricity to the clouds. Others have suggested, whether since thunder commonly happens in a sultry state of the air, when it seems charged with sulphureous vapours, the electric matter then in the clouds may not be generated by the fermentation of sulphureous vapours with mineral or acid vapours in the air. Some physicians are of opinion, that when a person is killed by lightning, there is an instantaneous and total destruction of the vital principle in every part of the animal machine, and consequently that any effort to restore animation would be useless; but others suppose that the influence of lightning, or of a powerful shock of electricity, is chiefly expended in disturbing or destroying the functions of the brain, and that, therefore, cases may occur in which suspended animation might be restored by preserving the animal heat, and maintaining artificial respiration till the body resumes its functions.

Thunder.] When two clouds highly charged with electrical matter meet, an explosion takes place, accompanied with a loud report, which we call thunder: the explosion, if high in the air, and remote from us, will do no mischief; but when near, it may, and has in a thousand instances, destroyed trees, animals, &c.[13] Although in this country thunder may happen at any time of the year, yet the months of July and August are those in which it may almost certainly be expected. Its duration is of very uncertain continuance; sometimes only a few peals will be heard at any particular place, during the whole season; at other times the storm will return at the interval of three or four days, for a month, six weeks, or even longer; not that we have violent thunder in this country directly

[13] The distance of thunder-clouds may be estimated nearly by the interval of time between seeing the flash of lightning, and hearing the report of the thunder; estimating the distance after the rate of 1,142 feet per second of time, or 3⅓ seconds to the mile. Dr. Wallis observes, that commonly the difference between the two is about 7 seconds, which, at the rate above mentioned, gives the distance almost 2 miles. But sometimes it comes in a second or two, which assures us that the explosion is very near us.

vertical in any one place so frequently in any year, but in many seasons it will be perceptible that thunder-clouds are formed in the neighbourhood, even at these short intervals. When lightning acts with extraordinary violence, and breaks or shatters any thing, it is called a *thunderbolt*, which the vulgar suppose to be a hard body, and even a stone. But when we consider the known effects of electrical explosions, and those produced by lightning, we shall be at no loss to account for the extraordinary operations vulgarly ascribed to thunderbolts. As stones and bricks struck by lightning are often found in a vitrified state, we may reasonably suppose, with Beccaria, that some stones in the earth, having been struck in this manner, gave occasion to the vulgar notion of thunderbolts. From Beccaria's exact and circumstantial account of the external appearances of thunder-clouds, the following particulars are extracted. The first appearance of a thunder-storm, which usually happens when there is little or no wind, is one dense cloud, or more, increasing very fast in size, and rising into the higher regions of the air. The lower surface is black and nearly level; but the upper finely arched, and well-defined. Many of these clouds often seem piled upon one another, and all arched in the same manner; but they are continually uniting, swelling, and extending their arches. At the time of the rising of this cloud, the atmosphere is commonly full of a great many separate clouds, that are motionless, and of odd whimsical shapes. All these, upon the appearance of the thunder cloud, draw towards it, and become more uniform in their shapes as they approach; till, coming very near the thunder-cloud, their limbs mutually stretch towards one another, and they immediately coalesce into one uniform mass. These he calls *adscititious clouds*, from their coming in to enlarge the size of the thunder-cloud. But sometimes the thunder-cloud will swell, and increase very fast, without the conjunction of any adscititious clouds; the vapours in the atmosphere forming themselves into clouds, wherever it passes. Some of the adscititious clouds appear like white fringes at the skirts of the thunder-cloud, or under the body of it, but they keep continually growing darker and darker as they approach to unite with it. When the thunder-cloud is grown to a great size, its lower surface is often ragged, particular parts being detached towards the earth, but still connected with the rest. Sometimes the lower surface swells into various large protuberances, bending uniformly downward; and sometimes one whole side of the cloud will have an inclination to the earth, and the extremity of it nearly touch the ground. When the eye is under the thunder-cloud, after it has grown large and well-formed, it is seen to sink lower, and to darken prodigiously: at the same time that a number of small adscititious clouds, (the origin of which can never be perceived,) are seen in a rapid motion, driving about in very uncertain directions under it. While these clouds are agitated with the most rapid motions, the rain commonly falls in the greatest plenty, and if the agitation be exceedingly great, it commonly hails. While the thunder-cloud is swelling, and extending its branches over a large tract of country, the lightning is seen to dart from one part of it to another, and often to illuminate its whole mass. When the cloud has acquired a sufficient extent, the lightning strikes between the cloud and the earth in two opposite places; the path of the lightning lying through the whole body of the cloud and its branches. The longer this lightning continues, the less dense does the cloud become, and the less dark its appearance, till at length it breaks in different places, and shows a clear sky. These

thunder-clouds are sometimes in a positive, as well as a negative state of electricity. The most extraordinary instance, perhaps, on record, of the destructive effects occasioned by clouds very highly electrified, and of the prodigious accumulation of the electric fluid which sometimes takes place in the atmosphere, happened in the island of Java, in August 1772. On the 11th of that month, at midnight, a night-cloud was observed covering a mountain in the district called Cheribon, and several reports like those of a gun, were heard at the same time. The people who dwelt upon the higher parts of the mountain not being able to fly fast enough, were overtaken by the cloud, a part of which, eight or nine miles in circumference, detached itself under them, and was seen tossing and bearing lower down the mountain, like the waves of the sea, and emitting globes of fire, so luminous that the night became as clear as day. The effects of this phenomenon were terrific. Every thing was destroyed for 20 miles round; the houses were demolished—the plantations torn up by the roots, or buried in the earth,—the whole stock of cattle and horses perished,—and 2,140 human beings lost their lives. "Experience teaches us," says Sturm, "that the rain which falls when it thunders, is the most fruitful to the earth. The saline and sulphurous particles, which fill the atmosphere during a storm, are drawn down by the rain, and become excellent nourishment for the plants; without mentioning the numbers of small worms, seeds, and little insects which are also drawn down in thunder-showers, and are, with the help of a microscope, visible in the drops of water."

Aurora Borealis.] The northern lights, sometimes called *streamers*, or *merry dancers*, is an extraordinary meteor, or luminous appearance, showing itself in the night time, usually in the northern parts of the heavens, but sometimes in southern climates also, and most commonly in frosty weather. The periods of the appearance of these northern lights are very inconstant. In some years they occur very frequently, and in others they are rare; and it has been observed, that they are more common about the time of the equinoxes, than at other seasons of the year. The following account of the aurora borealis, as it appears in Russia, is given by Dr. Granville:—"This phenomenon is of frequent occurrence at St. Petersburg. According to the meteorological tables of 20 years, northern lights appeared on an average 21 times in each year. In the year 1774, they appeared 48 times. From 1782 to 1786 they decreased, having been seen only 110 times during that period, and only 39 times from 1787 to 1791. This diminution in the yearly number of northern lights has continued more or less ever since; and looking for illustration at the tables of the same two years nearer us, which have supplied us with other data, namely, 1818 and 1819, I find that in the former year northern lights occurred only six, and in the latter twelve times. At the close of last autumn, this curious phenomenon appeared on one occasion, magnificently bright. The sky was illuminated from the horizon to the zenith, extending east and west to a considerable distance. Masses of fire in the form of columns, and as brilliant as the brightest phosphorus, danced in the air, and streaks of a deeper light, of various sizes, rose from the horizon and flashed between them. The brightness of the former seemed, at times, to grow faint and dim. At this conjuncture the broad streaks would suddenly shoot with great velocity up to the zenith with an undulating motion and a pyramidal form. From the columns, flashes of light, like a succession of sparks from an electric jar, flew off and dis-

appeared; while the streaks changed their form frequently and rapidly, and broke out in places where none were seen before, shooting along the heavens, and then disappearing in an instant. The sky in various places became tinged with a deep purple, the stars shone very brilliantly, the separate lights gradually merged into one another, when the auroral resplendence of the horizon increased and became magnificent. This phenomenon lasted nearly four hours; and at one time a large triangle of the strongest light occupied the horizon, illuminating in the most magnificent manner nearly the entire vault of heaven. From six to seven falling stars were observed at the time, leaving in their train a very brilliant light." This phenomenon was long regarded, even by philosophers, with a foolish and superstitious dread. The first time we find it mentioned in English annals, it is described as presenting the appearance of burning spears. Cornelius Gemma, a foreign naturalist, talks of it in still more marvellous terms, comparing its appearance, as observed by him in Brabant, in 1575, to fortified cities, and armies fighting in the air, with all the weapons and parade of war. Gassendus, in describing it as seen in France on the 2d September, 1621, first gave it the name of *aurora borealis*. Father Boscovich has determined the height of an aurora borealis, observed on the 16th of December, 1737, by the marquis of Polini, to have been 825 miles; and M. Bergman, from a mean of thirty computations, makes the average height of the aurora borealis, to be 72 Swedish, or (supposing a Swedish mile to be about 6½ English miles) 468 English miles. Euler supposes the height to be several thousands of miles; and Mairan also assigns to these phenomena a very elevated region, the far greater number of them being, according to him, 200 leagues above the surface of the earth. Dr. Thienemann considers this meteor to have no determinate relation to the earth. Dr. Blagden, speaking of the height of some fiery meteors, says, that "the aurora borealis appears to occupy as high, if not a higher region, above the surface of the earth, as may be judged from the very distant countries to which it has been visible at the same time;" he adds, "that the great accumulation of electric matter seems to lie beyond the verge of our atmosphere, as estimated by the cessation of twilight." It is not improbable, that the highest regions of the aurora borealis, are the same with those in which fire-balls move; more especially as Dr. Blagden informs us, that instances are recorded, in which the northern lights have been seen to join, and form luminous balls, darting about with great velocity, and even leaving a train behind like the common *fire-balls*. This ingenious author, however, conjecturing that distinct regions are allotted to the electrical phenomena of our atmosphere, assigns the appearance of fire-balls to that region which lies beyond the limits of our crepuscular atmosphere; and a greater elevation above the earth, to that accumulation of electricity in a lighter and less condensed form, which produces the wonderfully diversified streams and corruscations of

> "Those dancing meteors that ceaseless shake
> A warning blaze refracted o'er the heavens."

Refraction of the Sun's Rays.] The power of the clouds and air to reflect or repel the sunbeams, occasions certain phenomena distinct from meteoric appearances, viz. the morning *dawn* and evening *twilight*, and those brilliant tints which accompany the rising and setting of the sun. The first of these lasts as long as the sun is within 18 deg. of the horizon,

so that day and night alternately decline into each other by a gentle and pleasing gradation. By reason of the refractive quality of the atmosphere the sun appears to us as above the horizon before he actually arrives there; and though this phenomenon is of little importance to the inhabitants of the equatorial regions, in the polar regions, where the refractive power of the air is greatly aided by the thick vapours which are constantly floating in the air, the twilight and the latter phenomenon contribute greatly to cheer the long night of winter. Under the poles the dawn and twilight lasts each a month. The red or glowing dawn is occasioned by the vapours of the atmosphere reflecting only the red and yellow beams of the sun, which are also the lightest, and have inflexibility enough to penetrate through the atmosphere. The very refrangible rays seldom reach us.

Meteorit Stones.] M. Humboldt has, after a careful investigation of the nature and origin of those hard metallic bodies which occasionally appear to fall from the heavens, without any visible acquired projection from our earth, given it as his opinion that these irregular substances do not belong to our atmosphere. Some naturalists maintain that they are projected from the moon by some powerful volcanic agency, others, that they are detached portions of small moveable planets which circulate round our atmosphere. One hypothesis views them as fragments of a large planet which formerly existed between Mars and Jupiter, and of which the four small planets, Ceres, Pallas, Juno, and Vesta, are remaining portions; and another regards them as minerals in their primitive state, which have been ejected from the very interior of our globe, by volcanoes, situated in the polar regions, which produce, at the same time, the phenomenon of the aurora borealis. A later and more probable hypothesis accounts for the origin of these bodies on the principles of chemical combination. The atmosphere contains various gaseous substances; and it is no more impossible that such formations should take place by their combination in the upper regions of the air, than that chemists should be capable of producing a solid substance by the mixture of two aeriform fluids, or that a gaseous fluid should under certain known circumstances undergo fixation.

Atmospherical Dust.] Professor Rafinesque, of New York, maintains that an imperceptible dust falls at all times from the atmosphere, and that he has seen it on Mount Etna, on the Alps, on the Alleghany and Catskill mountains in America, and also on the ocean. This is the same dust which accumulates in our apartments, and renders itself peculiarly visible in the beams of the sun. He has found it to accumulate at the rate of from one-fourth of an inch to one inch in a year, but in such a fleecy state that it could be compressed to one-third of its height. Hence he takes the average of the yearly deposite at about one-sixth of an inch.

Winds.] The winds are the most remarkable and important phenomena which the atmosphere presents. Wind is a motion of the air; and every thing which disturbs the equilibrium of the air excites wind. The principal cause of wind is a change of temperature in the atmospheric regions, whether caused by the action of the sun, or that of foreign particles introduced into it. Thus isolated clouds are often known to excite wind, and the action of thunder-clouds causes violent tempests. It is clear, that as the rays of the sun descend perpendicularly on the surface of the earth under the torrid zone, that part of it must receive a greater proportion of heat than those where they fall obliquely; the heat thus

acquired communicates to the air, which it rarefies and causes to ascend, and the vacuum occasioned by this operation is immediately filled by the chill air from the north and south. The diurnal motion of the earth gradually lessens from the equator to the poles, where it moves at the rate of 15 geographical miles in a minute: this motion is communicated to the atmosphere in the same degree; therefore, if part of it was conveyed instantaneously, from latitude 39°, it would not directly acquire the velocity of that at the equator: the ridges of the earth meet it, and give it the appearance of an east wind; the effect is similar upon the cold air proceeding from the north and south, and this similarity must be admitted to extend to every place particularly heated by the beams of the sun. The moon being a large body, situated comparatively near the earth, is known to affect the atmosphere in its revolutions; it cannot, therefore, be doubted, that some of the winds we experience are caused by her motion.

East Passage Winds.] Between the tropics, and even beyond them, to the 28th and 32d, and on the N.E. American coast to the 40th degree of latitude, a constant wind blows, which is called by sailors the *passage wind.* In the northern hemisphere this wind is more or less N.E., and in the southern S.E. near land, and particularly where the coasts are high, it is sometimes perceived to follow the direction of the coasts; but upon extensive plains, or beyond the land, it appears again. During rain, or thunder-storms, it is sometimes interrupted by calms and opposite currents of wind. On its extreme boundaries, and in the middle near the equator, where storms are generally rare, we observe frequent calms accompanied with rain, and alternating with light varying breezes. In this respect a part of the Atlantic, between the 4th and 10th degree of south latitude, is in bad repute amongst sailors, as the peculiar region of thunder-storms, calms, and violent gushes of rain, which alternate with sudden squalls.

Monsoons.] The passage-winds are most regular in the open ocean; but from this rule the Indian Ocean forms an exception. In the southern part of this body of water, to the 10th degree of south latitude, we find the east passage wind; but advancing northwards we meet with regularly alternating winds blowing from a free quarter. These have received the name of *monsoons* or *moussons,* from the Malay *mussin* "or, season.' Northwards from the equator, a strong S.W. wind, accompanied with storms and rain, blows from April to October; and during the remainder of the year, a gentle N.E. wind prevails. These two winds are the monsoons properly so called. Three kinds of winds blow during winter in the Indian Ocean, viz. the N.E. on the south of the equator; the N W. south of the equator to the 10th degree of latitude; and the constant S.E. passage wind to the south of this latitude. In summer there are only two winds, viz. the S.W. from the 10th degree of south latitude northwards; and the S.E. passage wind to the south of this. Variable winds occur throughout the whole year in a small district at the equator. When the monsoon is about to change, which takes place within two or four weeks after the equinox, it grows gradually weaker, and sudden calms and blasts of winds alternate with thunder-storms, water-spouts, whirlwinds, and the frightful *typhoons* or hurricanes, till the new monsoon sets in. This convulsed and perpetually shifting atmosphere extends from the coast of Africa to the Philippine islands, and New Guinea. The N.E. monsoon causes strong currents in the Indian Ocean,

which change with the monsoon. The cause of these winds has not yet been ascertained. Perhaps one of the principal causes may be found in the fact, that the Indian Ocean is surrounded on the north by a high coast, from which the clouds and vapours collected during the summer, recede in winter when following the sun's course.

Sea and Land Winds.] To the periodical passage-winds belong the sea and land-winds, which generally blow upon the mountainous lands and coasts of the torrid zone, but occur in hot weather in the temperate zone also, and even in Norway. In calm weather these winds change daily and regularly, at 9 A. M. in some places, and at noon, or 1 P. M. in others, a soft gentle breeze rises and blows from the sea till about midnight, when a similar breeze begins to blow from the land to the sea, which lasts till morning. Forster says, that the South Sea islands, notwithstanding their small extent, enjoy these winds. The strength and effect of these winds is generally proportioned to the size of the country from which, or towards which they blow; but they are seldom perceptible above a few miles inland or at sea. They are evidently produced by the rarefication of the air on the surface of the land during the day, and the reduction of its temperature at night. The sea preserving a more equable temperature than the land, communicates it to the air above it; but as the land and its superincumbent atmosphere can only heaten gradually, the decided changes in the temperature can only occur at considerable intervals, or at noon and midnight.

Changeable Winds.] The changeable winds are of most frequent occurrence in the temperate and cold zones. They blow irregularly both as regards strength, duration, and direction, and have in general a more rapid motion than the constant winds. Some of these winds, however, occur more frequently than others, and these are called *reigning winds.* To this class belong the west winds of the temperate, and the east winds of the cold zone. Some countries are more liable to violent storms than others. Thus the Cape of Good Hope, the southern parts of America, and New Holland, the whole of New Zealand and Japan, and several other countries, are subject to violent storms, particularly during the winter season. The equinoctial storms which generally occur about the period of the equinox, are dreaded even in European seas. The prevailing winds of Britain, as ascertained by the Royal Society of London, are as follow:

Winds.	Days.	Winds.	Days.
South-west, . .	112	South-east, . .	32
North-east, . .	58	East, ...	26
North-west, . .	50	South, ...	18
West, . .	53	North, ...	16

The same observations show, that the S.W. wind blows more upon an average in each month of the year, than any other, particularly in July and August; that the N.E. prevails during January, March, April, May, and June, and is most unfrequent in February, July, September, and December; the N.W. occurring more frequently from November to March, and less so in September and October than in any other months. In the 5th volume of the *Statistical Account of Scotland,* there is a table of seven years' close observation made by Dr. Meek, near Glasgow the average of which is stated as follows:

Winds.	Days.	Winds.	Days.
South-west, . .	174	North-east, . .	104
North-west, . .	40	South-east, . .	47

In Ireland the prevailing winds are the W. and S.W.

These variable winds cannot be so readily accounted for; yet it is evident that, though they seem the effect of capricious causes, they depend upon a regular system, arranged by the great Author of Nature. That accurate and successful observer, the celebrated Franklin, discovered, in 1740, that winds originate at the precise point towards which they blow. This philosopher had hoped to observe an eclipse of the moon at Philadelphia, but was prevented by a N.E. storm, that commenced at seven in the evening. This he afterwards found did not occur at Boston till eleven; and upon inquiry, he had reason to suppose it passed to the N.E., at the rate of about 100 miles an hour. The manner in which he accounts for this retrograde proceeding is so satisfactory, that we shall give it in his own words, particularly as his assertions are supported by recent observations, both in America and Scotland. He argues thus: "I suppose a long canal of water, stopped at the end by a gate; the water is at rest till the gate is opened, then it begins to move out through the gate, and the water next the gate is first in motion, and moves on towards the gate; and so on successively, till the water at the head of the canal is in motion, which is last of all. In this case all the water moves indeed towards the gate, but the successive times of beginning the motion are in the contrary way, viz. from the gate back to the head of the canal. Thus, to produce a north-east storm, I suppose some great rarefication of the air, in or near the Gulf of Mexico; the air rising thence has its place supplied by the next more northern, cooler, and therefore denser and heavier air; a successive current is formed, to which our coast and inland mountains give a north-east direction."—According to the observations made by captain Cook, the N.E. winds prevail in the Northern Pacific Ocean, during the same spring months they do with us; from which facts it appears the cold air from America and the north of Europe, flows, at that season, into the Pacific and Atlantic Oceans.

Velocity of Winds.] The following is a table of the different velocities and forces of the winds, according to their common appellations:

Velocity (miles per hour)	Appellation
1	Hardly perceptible.
2, 3	Just perceptible.
4, 5	Gentle pleasant wind.
10, 15	Pleasant brisk gale.
20, 25	Very brisk.
30, 35	High winds.
40, 45	Very high.
50	A storm or tempest.
60	A great storm.
80	A hurricane.
100	A hurricane that tears up trees, and carries buildings, &c. before it.

The force of the wind is nearly as the square of the velocity, or but little above it, in these velocities. But the force is much more than in the simple ratio of the surfaces, with the same velocity, and this increase of the ratio is the more, as the velocity is the more. By accurate experiments with two planes, the one of $17\frac{3}{4}$ square inches, the other of 32, which are nearly in the ratio of 5 to 9, Dr. Hutton found their resistances, with a velocity of 20 feet per second, to be the one 1,196 ounces,

and the other, 2,542 ounces; which are in the ratio of 8 to 17, being an increase of between one-fifth and one-sixth parts more than the ratio of the surfaces.

Direction of the Winds.] The winds do not move in the same direction through the atmosphere. On the contrary, we frequently observe the wind of the upper regions blowing in a totally different direction from that of the lower. The very loftiest regions of the atmosphere enjoy probably uninterrupted serenity. The winds generally move in a horizontal direction, and hence they receive their names from the quarter of the horizon from which they blow; but we also find currents of air moving in a direction inclined to the plane of the horizon and at various angles. It is a remarkable fact, that violent currents of air pass along, as it were, within a line, without sensibly agitating that beyond them. An instance of this kind occurred at Edinburgh, when the celebrated aeronaut, Lunardi, ascended in his balloon, which was conveyed with great velocity, by the wind, at the rate of 70 miles an hour, while a perfect calm existed in the city and neighbourhood.

Hurricanes.] The most dreadful storms which occur in the atmosphere are the hurricanes by which the Antilles and Mascarenes are so often ravaged. The fury of these appalling phenomena is beyond all idea, they appear to be a horrid mixture and chaos of all the elements, lightning, thunder, rain, hail, and wind, and communicate to the air a velocity surpassing that of gunpowder, which sweeps away every object which it meets with in its course, and lays whole districts bare and desolate. Mr. Stewart, in his *View of the Past and Present State of Jamaica*, says:—"A hurricane is usually preceded by awful and certain prognostics. An unusual calm prevails; not a breath of wind is felt; the atmosphere is close and sultry, the clouds wild, broken, and perpetually and rapidly shifting; at length a deep and portentous gloom gradually settles and overspreads the hemisphere; the sun is enveloped in darkness; a deep, hollow, murmuring sound, is indistinctly heard, like the roaring of a distant cataract, or the howling of winds through remote woods,—rapid and transient gusts of wind and rain speedily succeed,—various birds of passage are seen hastily driving along the sky, or are thrown down by the violence of these gusts,—even the cattle grazing in the fields, as if instinctively aware of the approaching danger, withdraw to the thickets for shelter. The blasts soon become more impetuous; at one moment they rage with unconceivable fury, and the ensuing instant seem as it were suddenly to expire. In a few hours the hurricane reaches its acme of violence—when all the winds of heaven, and from every point of the compass, winged with destruction, seem let loose from their caverns. The largest trees are thrown prostrate, or shattered and stripped of their foliage; the provision-grounds are laid waste; the sugar-canes levelled to the earth, and in the more exposed situations, torn up by the roots, and wafted about like chaff. Many of the dwellings are blown down, or unroofed, and their inhabitants too often either buried in the ruins, or driven forth to perish unsheltered. Nothing can be more appalling than the wild howling and threatening violence of a hurricane during the night, when the vivid and quickly-succeeding gleams of lightning, darting athwart the heavens, make 'darkness visible,' and heighten the horror of the scene." Fortunately, however, their duration is usually short, and their sphere of action very limited. Their usual prognostication is a small cloud which appears above some mountain, and spreads out with

great rapidity till it has enveloped the whole mountain; or a copper coloured cloud which rises in a serene sky, and suddenly obscures the whole horizon, after which the tempest bursts forth, and the whole air is thrown into the most violent agitation. The probable cause of these phenomena is thought to be the quick transition of a watery vapour into a fluid, from whence the air rushes in with violence into the vacuum thus occasioned, and a chemical action likewise takes place. Hurricanes are known only in the torrid zones.

Water-Spouts.] A phenomenon not less fearful and destructive in its sphere than the hurricane is the water-spout. Its appearance may be thus described: The sea is observed to become suddenly agitated under a low rainy-looking cloud,—the broken waves appear to collapse towards the centre of the troubled mass of water, and finally seem dissolved into a drizzly vapour, which rises in spiral lines towards the cloud,—at the same moment that this column rises from the sea, another is seen descending in an oblique line from the overhanging cloud, which unites with the former; and the united column, though frequently fifty fathoms broad at the base, seldom presents a greater diameter than that of 2 or 3 feet throughout the greater part of its length. The honourable captain Napier calculated the height of one observed by him at 1,720 feet, or very nearly one-third of a mile. The whole column appears like an empty glass cylinder, and in this form glides rapidly over the surface of the sea, though no wind be observable at the moment; sometimes they move in direct opposition to the prevailing wind, and when several water-spouts are raised at the same moment, they frequently take opposite directions. When the surmounting cloud does not move with the same rapidity as the base of the column, the spout assumes an oblique direction, or even a curvilinear form, and at last is torn asunder with a rushing noise like that of a cataract in a deep valley. In some instances electrical light appears to proceed from the columns, or is excited in the immediate neighbourhood at the moment of its dissolving. It is alleged, and with probability, that water-spouts may be broken and dissipated by the commotion excited in the air by the firing of cannons, which corresponds with the dissipation of thunder-clouds by the ringing of bells. Water-spouts usually appear after storms, or after a long tract of sultry weather, in narrow seas or straits, and occasionally upon large rivers, or lakes. Opposite currents of wind coming in contact with each other with unequal forces, communicate a rotatory motion to the cloud, till it assumes a hollow conical form, and into this tube, assisted no doubt by electrical influence, the waters are drawn up so as to form a water-spout. There is a species of water-spout called a *typhon*, which is very frequent in the Chinese Sea. The typhon descends not from the clouds, nor is produced by the action of opposite winds. It, on the contrary, rises from the water to the heavens with amazing rapidity. Whirlwinds often run along considerable tracts, bearing down houses, trees, and every obstacle that they meet with. But typhons remain always in the same places, and are probably owing to the action of subterraneous fires; for the sea is then in the greatest agitation, and the air is so impregnated with sulphureous exhalations, that the sky appears to be covered with a copper-coloured crust, although there be no clouds, and the sun or the stars appear through the vapour. Buffon thinks it is to these subterranean fires that we must ascribe the warmth of the Chinese Sea in winter, where these typhons are very frequent.

Peculiar Winds.] The winds generally assume the temperature of the countries over which they blow. They are consequently warm or cold, moist or dry, according to the character of the region from which they proceed. Some winds are likewise distinguished by peculiar qualities and effects arising from the presence of a peculiar air or vapour in excess. The most dreadful of these are the *simoom* which sometimes blows in Arabia and Persia. The *chamsin* of Egypt sometimes approaches the Simoom in character and destructive agency. But the *harmattan* of Guinea and other African districts is a less formidable wind. The description of these peculiar winds, however, belongs more properly to particular geography.

Utility of the Winds.] The winds purify the air, by carrying off or dispersing noxious exhalations. They also convey the vapours and clouds of one district to another, without which provision of Nature, every district would only receive its own exhalations again by precipitation. They modify the temperature of the atmosphere,—refresh and dry the objects at the surface of the ground,—put collections of stagnant water into motion,—and supply a powerful agency to man in his mechanical arts.

Physical Seasons.] As the warmth of the air is the effect of the solar rays, the proximity or distance of places from the sun must occasion a great difference in their respective temperatures: this difference, and the natural phenomena dependant upon it, form the *physical seasons.* If the surface of the earth were a perfect sphere or ellipsoid, everywhere covered with water, the heat would gradually diminish in a certain proportion from the equator to the poles,—regularly follow the course of the sun,—and exhibit the same temperature in the same latitudes; but the different situations, heights, and physical qualities of different regions, cause very striking deviations from this rule. Thus countries lying under the same latitude often possess very different temperatures, and the physical seasons seldom agree exactly with the astronomical seasons which depend on the relative positions of the earth and sun. It is not even possible to give general definitions of the physical seasons.

The torrid zone has only two seasons; viz. the *wet* and the *dry*; the former corresponding to the winter-season, and the latter to that of summer, but they are in direct opposition to the astronomical seasons; for the rain accompanies the sun, and when the sun stands in the northern sign, the rainy season begins northwards from the line; and when the sun is situated in the southern sign, it is the dry or summer-season. The contrary of these changes takes place on the south of the equator. The beginning and duration of these seasons happens at regular periods, but is influenced in all other respects by local circumstances, particularly the presence of mountains. Thus, a country intersected by a high ridge running from N. to S. exhibits different seasons at the same moment on the E. and W. of the ridge. In some countries there are two summers and two winters, which are distinguished as the long and short summer and winter-seasons. Within 20 degrees of the equator, the difference of heat in summer and winter is usually very inconsiderable; but upon the limits of the torrid zone it becomes more perceptible. The ancients believed the torrid zone to be uninhabitable, on account of the extreme heat which they supposed must rest there. But this heat is much tempered by various causes. The clouds which veil the sky in the rainy seasons absorb the sunbeams, and the violent gushes of rain which happen at this season greatly moderate the heat. The nights are even cold, being

almost throughout the whole year of equal length with the day, and consequently long enough to cool the earth considerably. The vast extent of ocean, and the prevailing east winds, also temper the heat; while the elevated situation of some districts greatly reduces the temperature. Quito enjoys a moderate climate, and extreme cold is felt upon the neighbouring Cordilleras. The greatest heat exists probably in the interior of Africa, and the countries of Senegambia and Guinea. Nothing can equal a tropical summer in magnificence. The cloudless sky reflects an intense light during the day,—and at night the light of the moon and the splendour of the milky way illuminate the whole heavens, while the serene repose in which all nature seems wrapt, produces the most pleasing effect on the mind of the spectator.

The temperate zone approximates very closely in climate to the torrid zone in its immediate neighbourhood; but the difference of seasons becomes visible as the distance from the limits of the latter increases. In physical respects, spring is here that season when the cold of winter yields so much to the heat of summer, as to allow the plants to put out their blossoms; summer is the season during which the fruit attains maturity; autumn that of harvest and the departure of the passage-birds, till whose re-appearance winter endures. It seldom snows in low countries till we reach the 40th parallel; but the trees lose their leaves during the short winter. The difference of seasons is most observable between the 40th and 60th parallels. Here the weather is most changeable, and local circumstances produce the greatest diversity of climate. Spring and autumn gradually shorten as we proceed towards the high north; and in the neighbourhood of the Polar zones we again observe only two seasons,—the short summer and long winter, bordering so closely upon each other, that in the short space of a few days, hardly deserving the name of a season, vegetable life springs into activity. The summer is late, but hot, the power of the oblique sunbeams being assisted by the length of the days; but the cold of winter is so extreme, that brandy freezes even in closed apartments. In the district of Bigorre, in the French Pyrennees, there are only two seasons,—summer instantly succeeds to winter, and cool nights to intensely warm days.

Physical Climate.] The *real*, or physical, climate of a country agrees as little with the mathematical climate, as the physical seasons with the astronomical. The mathematical climate, however, which depends upon the absolute effect of the sun, its relative situation, and the length of the days, forms the basis of the physical climate. But the latter is modified by the physical qualities of a country; viz. its height above the level of the sea, the inclination of its mountains, the character of its soil. and the reigning winds.

With the elevation of a country the temperature decreases. Coast districts are always less cold than the inland ones, and that not merely because they are usually less elevated, but also because the sea preserves a more equable temperature, which it communicates to the adjoining country. Hence it happens, that Bergen, in Norway, under the 60th parallel, enjoys a milder climate than the middle of Germany under the 50th. Coast districts, however, are subject to more frequent and rapid changes of weather, and to storms. Mountains strengthen or impede, according to relative situation, the effect of the sunbeams and the wind. The severe cold of Siberia is in a great measure attributable to the position of the mountains, which lying southwards, expose it to the north

winds, while they check the southern breezes. Sweden and the south of Norway owe their comparatively mild climate to the range of the Scandinavian Alps, which protects them against the rough north winds. Wooded mountains are of great utility, particularly in islands, by collecting and condensing the clouds into fertilizing rain, and the destruction of the woods in the Cape Verd islands, has been followed by the drying up of the springs and streams. An interesting and able investigation into the supposed changes in the meteorological constitution of the different parts of the earth, during the historical period, has been made by M. Schow, Professor of Botany in the University of Copenhagen; and, after an extensive examination of all that the ancients have left us, connected with their botany and agriculture, compared with our present experience on those subjects, the author thinks himself entitled to assume that the climate of Greece and Italy, like that of Palestine and Egypt, has undergone no important change since ancient times. But if, on account of the later harvest and the possible growth of the beech-trees in the Roman plains, we might be led to the opinion that formerly the climate had been a little colder than now, the difference will hardly come up to one or two degrees, and will not be greater than might be occasioned by the cultivation of the North of Europe. The quality of the soil modifies the climate, because all kinds of earth do not acquire an equal temperature under the same circumstances, and because incessant exhalations rise from the soil into the atmosphere, partaking of the nature of the substances from which they are detached, and communicating these qualities to the air. Thus, a dry sandy soil, every where acted upon by the sun's rays, as in the deserts of Arabia, heats the air, while the exhalations from the thick woods and putrid marshes of Batavia load it with the most noxious particles; and the quantity of saline particles which are present in the soil of Siberia, greatly contribute, upon well-known chemical principles, to increase the cold of that district. Hence too the happy change which agricultural art always effects upon the climate of a country. The *Germania sylvis horrida* of Tacitus is no longer to be recognized by the stern forbidding features under which that accurate observer beheld it; and those districts of our own country, once impenetrable to any foot save that of the wild beast, or his almost equally savage hunter, are now the abodes of peace, health, and plenty. It has been alleged, in the case of the valley of Aran, in the district of Bigorre, already instanced, that cultivation has rendered that tract of country less healthy, because the clouds now sweep over the country instead of being attracted and dispersed by the woods, which also no longer present their barrier to the scorching south-wind. Castile and Arragon are likewise represented as furnishing similar cases. But it seems probable that these instances have been overstated; and allowance must be given for the infant state of agriculture in these districts, for all countries necessarily suffer more or less during the earliest stages of agricultural improvement, when the lands are first thrown open and proper means have not been adopted for their draining and inclosing. The reigning winds render the climate of a country more or less humid. The winds coming from the nearest pole in the temperate zone bring serene and dry weather, and the winds blowing from the equator produce damp and misty weather.

The Thermometer.] The thermometer, long after its invention, remained a very rude and imperfect instrument, both in its construction and graduation. Water, oil, and alcohol, were successively used to fill it; but

the preference was afterwards given to mercury, on account of its uniform expansion by heat, and its remaining stationary at the heat of boiling water. The temperature of deep caves was afterwards employed as a point from which to graduate the scale, as representing the mean heat of the earth, before it was known that this is materially modified by the latitude of the place, and its elevation above the level of the sea. Various other modes of arbitrary and incorrect graduation were resorted to, till it was discovered that the congelation of water, or the thawing of ice and snow, was a point that remained fixed and stationary under all circumstances. The thermometer was greatly improved by Fahrenheit, a manufacturer of this instrument at Amsterdam, who, about the year 1720, first adopted the scale which still retains his name, and which is commonly used in this country.—Supposing the mercury in the bulb to be divided into 10,000 parts, he reckoned 64 of these as the expansion between the freezing of water, and the heat of the blood of the human body, and 32 as the contraction from freezing to an extreme degree of cold produced by a mixture of snow and salt. This degree of extreme cold he noted as the zero of his scale, the freezing point 32, and blood heat 96. In endeavouring to fix the point at which water boils, Fahrenheit discovered the important fact that that point varies with the variations of atmospherical pressure; but taking a mean of his observations, he found it 180 from the point of congelation, and accordingly marked it 212 on his scale. This graduation of the thermometrical scale being determined by two points, one of which never varies, and the other can be easily ascertained, and the numbers being convenient for repeated bisection, it was found more accurate than any which precedes it, and very soon generally adopted. In the progress of science, however, when calculations of the measurement of heat by the thermometer came to be employed in scientific researches, it was found that a scale more adapted for such calculations would be preferable, and in 1742 Professor Celsius of Upsal constructed a thermometer, having the range between the points of the congelation and the ebullition of water divided into 100 degrees, the point of congelation being marked zero, and that of ebullition 100, and the same graduation carried downwards below zero for degrees of cold greater than the congelation of water. This centesimal scale is the one now generally used in France, and which in that language is called *centigrade*. The degrees of it are of course greater than those of Fahrenheit in the proportion of 10 to 18; but these by the help of a vernier may be conveniently subdivided decimally, which will augment the range to 1000 between freezing and boiling water. In quotations the degrees below zero are readily distinguished from those above it by prefixing the sign—(*minus*) as 0—3 or simply—3. The centigrade scale is excellently adapted for all decimal calculations, particularly in the measurement of altitudes by the barometer, in which the thermometer is a necessary auxiliary. The scale of Fahrenheit being in such general use in this country, and employed in the domestic arts of brewing, baking, &c. it is not probable that it will soon be superseded by the centigrade.

Magnetism.] There is yet one other power, or substance, in nature, which, although it as yet appears to be united to one single body, may exercise an influence over all terrestrial bodies, and ought not to be wholly omitted in any treatise on physical geography,—we allude to *magnetism*. The quality which the magnet—a species of iron ore—possesses of attracting other magnets, iron, and bodies containing

iron, presents a curious subject of inquiry to the naturalist. Another quality of the magnet: viz. its uniform disposition in every situation where it is allowed to move freely on an axis, to direct its poles towards the two poles of the world,—a property which it can communicate by friction, or contact, to needles of steel, renders it a most important instrument in the hands of the geographer and navigator. It was the discovery of this property of the magnet which led to the invention of the mariner's compass,—one of the most valuable instruments we possess. The phenomenon itself is attempted to be explained by supposing that the globe itself is a great loadstone which exercises its magnetic force upon all bodies more or less sensibly.

The Mariner's Compass.] The compass is a highly magnetized steel needle, contained in a box adapted to the purpose. They are of two kinds: viz. those with declination, and those with inclination needles. The first—which are commonly understood when we talk of the magnetic needle—move horizontally upon a steel point, directing one end invariably towards the north, with a greater or less declination towards the east or west. The deviation, or the angle that the axis of the magnetic needle makes with the meridian place of observation, is termed its *declination*, and the direction towards which it points is called the *magnetic meridian.* This angle varies in different places, and even in the same place at different times. An alternate daily diminution and augmentation of the declination is likewise observable; and some natural phenomena, as, for example, the *aurora borealis,* cause great fluctuation in the needle. But there are some places on the globe where the magnetic coincides with the geographical meridian, or, in other words, where the needle has no declination. A line drawn through these places is called the *line* or *belt without declination;* but these belts change their position every year, so that the magnetic maps, upon which the declination of the magnetic needle over the whole earth is represented, must be revised every 10 or 12 years, and the navigator who steers according to the compass must make fresh calculations for the declination to secure a correct course across the ocean. The inclination needles are also magnetized needles, which, placed in another kind of frame, point downwards with their north pole when they are placed in the line of declination, or the magnetic meridian, and thus show the inclination of the compass, or the angle which the needle forms with the horizon. Their angle is measured by an instrument called an *inclinatorium.* It is as valuable as that of the declination; and like it is occasioned by the great magnetic principle of the globe itself, the true nature of which, however, has not yet been explained by any naturalist in a satisfactory manner.

CHAP. IV.—PRODUCTIONS OF THE EARTH.

UNDER the name of *Productions of the Globe,* we comprehend all natural bodies found upon, or within the earth, whether animated or not. It is well-known that these productions are arranged by naturalists into three great classes: viz. the animal, vegetable, and mineral kingdoms; and that on account of their multitude and variety, their classification and description form a distinct science, called *Natural History.* But as the productions of the different countries of the earth are frequently alluded to by the geographer; and as the description of any district would be con-

sidered very imperfect without an enumeration of its natural productions, we cannot wholly overlook the general subject in an introductory sketch, though we must necessarily satisfy ourselves with the most superficial glance at such a boundless field. In a geographical survey of the natural productions of the earth, no other arrangement can be adopted than that dependent on the climates or zones in which these objects are found; and it is only their local distribution, not their qualities or affinities, which forms the proper subject of the geographer's investigations.

Distribution of Minerals.] Any inquiry into the geographical distribution of minerals is subjected to great difficulties; for our knowledge is confined to the external crust of the earth, and of this only a few portions have been explored by man. Judging from surface-appearances alone, we can detect no distribution according to zones or climates in the situation of minerals; at the same time, if it could be proved that climate, air, and water, exercise a distinct influence in the production of minerals, some such principle of local distribution would have to be conceded to us.

Some minerals may be generally distributed, and others from local causes be confined to small districts. Among the metals, iron, gold, and manganese, are considered as the most generally distributed over the earth. It is at least certain that the most useful minerals are the commonest. Iron abounds in the torrid as well as the frigid zone. No kind of rock or earth is destitute of it. It is found in granite, in detached masses; in schist, in a thread-like form, in freestone, in beds; and even its presence may be detected in mud and turf. Guettard believed he had discovered the law of distribution in the hypothesis, that in countries lying under the same latitude, the same minerals would be found. But he only compared Switzerland with Canada; the Cape and Madagascar with France and the Archipelago; and Cochin China with Rio Janeiro; a series of observations by no means sufficiently extensive for venturing to deduce a general law. The rich mines of noble metals in India, Africa, Spanish America, and Peru, have been instanced in support of this theory; but gold and silver are productions by no means confined to the torrid zone. The silver mines of Dala and Kongsberg are situated under the 60th parallel of northern latitude; the mines of the Harz, of Saxony, and Asiatic Russia, under the 50th; and the gold mines of Hungary not much farther south. In Germany, and in Scotland, many kinds of precious stones are found, although it is not to be denied that the most valuable and brilliant gems, as well as the richest minerals, are found in greater quantities, and of finer quality, in the torrid zone than in other parts of the earth.

Distribution of Plants.] With regard to the vegetable kingdom, the principles of geographical distribution, according to climate, can be much more easily followed out. The distribution of organized beings in general depends on the three co-ordinates of latitude, longitude, and altitude. Botanists compute that, at Spitzbergen, which lies near the 80th degree N.L., there are only about 30 species of plants; in Lapland, which lies under the 70th degree, about 534; in Iceland, under the 65th parallel, about 553; in Sweden, from the southern parts of Lapland to the 55th degree, about 1300; in Brandenburg, between the 52d and 54th parallels, 2000; in Piedmont, between the 43d and 46th, 2800; nearly 4000 in Jamaica, which is between the 17th and 19th degree; and in Madagascar, situated under the Tropic of Capricorn, between the 13th and 14th degrees, more than 5000. It is true, that plants of the frigid zones are also

found in the torrid; but they occur only in situations where they find a temperature as low as that of the colder zones, viz. upon high mountains. Thus the plants of Greenland and Lapland are found not only on the Alps and Pyrenees, but even on the Cordilleras. Edwards says, that while no tropical fruits grow upon the mountains of Jamaica, many European fruits thrive admirably; European Alpine plants occur on the cold mountains of Terra del Fuego; and the pine occupies the extreme limit of arborescent plants in the mountains of America, of Switzerland, and Lapland. The same physical climate, therefore, favours the growth of the same plants. If under the same climate we do not observe the same plants produced, we must attribute the difference to local peculiarities, such as the quality of the soil, the degree of shade, the atmosphere, and other circumstances. Some plants are found universally distributed, and are consequently adapted to every climate; while others are confined to very limited districts, beyond which they cannot be cultivated. Many plants, particularly the most useful ones, may be successfully naturalized, by judicious management, in countries far distant from their original habitat, and under climates very different from that in which they were originally found. Most of our fruit-trees, our corns, and edible vegetables are of foreign extraction. Men have availed themselves of this bountiful provision of Nature to such a degree, that it is no longer possible to distinguish in all places the indigenous from the foreign plants. The migration of plants has been assisted by the sea, the wind, and granivorous birds and quadrupeds, as well as by the hand of man himself. Not only has man intentionally transported the coffee-tree from Arabia to the West Indies, and the tobacco-plant from America to the shores of Europe, but even the accidental introduction of a foreign seed into a bale of merchandise, has conveyed the plants of the Brazils to the fields of Lisbon, and some of these have in their turn been transported by means as accidental to the coasts of England. Many plants which have yet appeared to be confined to one district, may be accessible to the cultivation of other regions, were a favourable wind, or the hand of the botanist himself, to bear their seeds thither. These remarks will show how difficult it is to mark with exactness the regions of botanical geography, even supposing we were possessed of much more accurate and extensive information on the subject than we are at this moment.

Plants of General Distribution.] The anti-scorbutic and edible plants seem to be the most widely diffused throughout the earth. Such are the different varieties of cresses, celery, parsley, and scurvy-grass, which are found on every coast which has yet been visited by navigators. Many plants bearing edible berries are also of very general distribution, and form an important article of food to man. These graminea also, which are of most valuable service to man and the inferior animals, are very widely spread, although different species of them appear to thrive best in certain climates. The mosses and lichens, however, are of widest distribution. They are found in every part of the world, and in every situation.

Vegetation of the Frigid Zones.] During the brief summer of the polar regions a considerable number of plants appear, particularly mosses and ferns, creeping plants, and berry-bearing bushes, such as the currant, the *Rubus chamæmorus* and *arcticus*, and different species of *Vaccinium*, the luxuries of the Siberian and Laplander. The birch and the fir in Greenland, and along the coasts of the Icy Sea, are mere dwarfs compared

with their species in the warmer countries of Europe. As the polar climate exhibits a much less variety of temperature than that of other zones, the vegetation of the frozen zones is more limited than that of any other part of the world.

Vegetation of the Temperate Zones.] The diversity of climate which exists in the temperate zones, assisted by the not less striking diversity of soil, enables them to produce a very great variety of plants. Upon the boundary of the frozen zone begins the perpetual verdure of the pine and the fir, which are succeeded by the apple, the pear, the cherry, and the plum. The more common species of corn, such as wheat, barley, oats, millet, and rye, grow everywhere from the tropics to the polar circles,—from the north of Africa to the south of Sweden. The potato, according to some naturalists a native of Guiana, according to others, of Chili, is now found in Siberia as well as at the Cape of Good Hope. The species of the genus *Rosa*, found in Europe, have reached us from the East Indies, China, and Japan. Europe, from the Uralian Mountains to the coast of Portugal, abounds with this beautiful plant. The roses of America have reached that continent through the polar lands. There are no roses in Australasia, nor have any species been met with in South America; indeed, they scarcely occur any where to the south of the equator. Rice, maize, and spelt, and the finer fruits, such as olives, figs, capers, dates, and tamarinds, belong to the southern parts of this zone. The vine and the mulberry occupy the space between the 30th and 50th parallels; and peaches, apricots, almonds, and walnuts are equally injured in their growth as they approach the tropic or the polar circle. The sugar-cane and the cotton-plant, though tropical plants, are found growing far within the temperate zones. Many European plants have changed greatly under cultivation. Two hundred years ago there was only one variety of tulip—the yellow—known to florists, and there now exist upwards of 3000 varities.

Plants of the Torrid Zone.] The richest and most beautiful vegetation belongs to the torrid zone, which possesses not only the finer plants of the temperate zones, but many magnificent specimens of the vegetable kingdom peculiar to itself. In addition to its own kinds of corn, such as durra, poa, several species of holcus, cambri, kebru, and solam, it possesses the greatest variety of delicate fruits, the strongest spices, and the richest perfumes. To the plants peculiar to this zone belong the palm tribe, the pisang, bread-fruit, cacao, vanilla, indigo, the pine-apple, the nutmeg, ginger, camphore, cassava, cinnamon, and cloves, the most beautiful cabinet-woods, and the most valuable medicinal plants. The nearer we approach to the equator, we find

'bolder hues
And richer sweets, beyond our gardens' pride.'

Distribution of Animals.] The animal kingdom seems most subjected to the principle of geographical distribution. Climate acts even on the exterior form of animals. Foster observes, that, under a rigorous climate, the organization of animals, the human species not excepted, is far less graceful than under a mild sky or a warm sun, where alone we are to look for beauty of form and brilliance of colouring.

Fishes.] However, it is not easy to apply this principle alike to all classes of animals. We are very imperfectly acquainted with the fishes, and their abodes are far too measureless for our limited means of

observation. It seems, notwithstanding, that there are certain species of this class of animals to which we can assign a geographical locality. Thus the choryphenæ and the chatædons are met with only in the torrid zone; the flying fish never beyond the 40th parallel; the electrical eel belongs exclusively to America; and the great whale of the northern seas has scarcely been able to approach the equator. Yet, with regard to the local haunts of these fishes, it is very probable that they are more determined by the nature of the soil, and the food which is found in certain districts, than by the temperature. Nor can we discover any sensible difference in the number of fishes in different places of the ocean. The distribution of land-animals is considerably regulated by temperature and moisture; but the sea seems everywhere equally occupied by its finny inhabitants. The bounty of Providence, however, shines conspicuous in this as in every other department of nature: for the fishes which are of most value to man as food, are the most numerous. Each female cod carries in its ovary more than 9,000,000 of eggs; and the coasts of those countries, otherwise destitute of food for man, are rich in fishes, and annually visited by immense shoals of herrings.

Birds.] Birds are widely but variously distributed. "The wings with which they are provided," says Malte Brun, "seem to assign to them the whole atmosphere as their domain; but the plumage in which they are clad, and which, like vegetation itself, varies according to climate and temperature, proves to us that these animals, apparently so free, are still subject to certain geographical laws." We may regard the raven, the goose, the hen, the pigeon, the woodcock, the storm-bird, the sea-gull, and the ospray, as common to all countries. In the frigid zone, and in regions where only a few of the hardiest lichens and mosses can bear the rigour of the climate, we find the penguin, the petrel, the wild-goose, and the eider-duck, all enveloped in a thicker, warmer, and more oily plumage than the birds of warmer regions. The transition from the frigid to the temperate zone, in the southern hemisphere, is made by the penguin. In the temperate zone we find the finch, the nightingale, and almost the whole of the sparrow order, the heath-cock, partridge, pheasant, turkey, ortolan, bustard, crane, and albatross, and a multitude of birds of varied plumage and song, which seem to inhabit with equal facility every region between the 30th and 60th parallel. The pelican and the flamingo unite the birds of the temperate and torrid zones. To the latter belong the ostrich, the cassowary, the very numerous tribe of paroquets, the bird of Paradise—which, however, is limited to New Guinea and the neighbouring islands—the frigate, the tropic-bird, and a variety of beautiful birds

'whose legions cast
A boundless radiance waving in the sun.'

Insects.] M. Latreille has attempted with some success to make geography accord with entomology in a general manner. That naturalist asserts, that a space in latitude measured by an arc of 12 degrees, some local variations being abstracted, produces a very sensible change in the mass of the species, and that such change is almost total if the arc is doubled to 24 degrees, as from the north of Sweden to the north of Spain. This change takes place equally in the direction of the longitude, but in a much slower manner, and at greater intervals, since the mean temperature, without particular and modifying causes, would be uniform under the same parallel. M. Latreille runs back the highest limit of his obser-

vations to the 84th parallel, and thus includes in his first climate of 12 degrees, the insects of the greatest part of Greenland, Iceland, and Spitzbergen. In the next climate, extending from the 72d parallel to the 60th, are the insects of Norway, and of the north parts of Sweden and European Russia. The third climate includes Great Britain, the south of Sweden, the north of France, as far as the inferior course of the Loire, the north of Prussia, and of Germany Proper, and the south of Russia, as far as the Crimea. The fourth climate comprehends all the other insects of the south of Europe, and of a western portion of Asia. The three other climates extend from the north of Africa to the equator. The progressive increase in the temperature has an influence on the size and colour of insects. In general, the nearer we approach the equinoctial region, we find the greater number of species remarkable for their size, the eminences and inequalities of their bodies, and the brilliancy and variety of their colours. The same eminent naturalist thinks that light exercises a considerable influence on the colours of insects,—its augmentation tending to convert yellow into red or orange, and its diminution causing them to pass into white. The same observation applies also to shells. The *Helix nemoralis*, which in our climate has a yellow ground or base, is red or reddish in Spain. Observations such as these, M. Latreille justly remarks, interest the geographer not less than the naturalist. They may prove useful in the determination of the natural limits of disputed countries, as in the case of islands situated between two continents, the respective distance of which may be too great to enable animals and vegetables to be propagated from the one to the other. Thus the Canary Islands and Madeira ought to be associated with Africa by geographers, for the insects found there are perfectly analogous to those of Barbary and the adjacent countries. Mr Say, an eminent American entomologist, who has published a most elaborate treatise on this subject, has enumerated 200,000 species of insects; and it is conjectured, with great probability, that at least an equal number still remains for future discovery.

Distribution of Quadrupeds.] The observations of the geographer on the distribution of quadrupeds, are more satisfactory than those respecting the other orders of animals. Although our knowledge of the earth is still very imperfect, we can yet discover a very remarkable principle of distribution as regards the various kinds of quadrupeds. A principle less regulated by the physical strength of the animal, than by the adaptation of its constitution to certain climates. We are not, however, entitled to argue from the migration, or general diffusion of one species, the same capacity in the whole genus; for, it frequently happens, that one species is widely spread, while another of the same genus is limited to very narrow boundaries. The carnivorous animals, which find their food every where, and some of which can, in necessity, support themselves upon vegetables, have spread themselves to a greater extent than those which exist only upon vegetable food. The latter are also, in general, of a more delicate constitution. It may also happen, that many species at this moment limited to a small spot of earth, may, in the course of time, spread themselves over whole zones, especially under the care of man; while others will retire, and may eventually disappear altogether, before the progress of agriculture. When animals are transported from one region to another, they either improve or degenerate under the change of climate and food, and the different modes of treatment to which they are subjected.

Quadrupeds generally distributed.] Several animals, both in a

domesticated and wild state, are so generally distributed as to render it impossible to classify them geographically. Among these are, the dog, the widest spread of all animals, being the faithful companion of man in every climate, from New Holland, to the highest North. The wolf, a kindred species, and, according to some naturalists, the original stock of the canine species, is likewise very widely spread, being found in the Old World, from the polar zone, to the southern point of Africa, and in America, from Canada to Mexico. The ox lives as far as the 64th degree in a domesticated state; but the buffalo is not found beyond the 54th. The sheep and the goat, endure equally well the extremes of the polar and equatorial climates. The argali, or mouflon, (*ovis ammon*, L.) supposed to be the original parent of all the different species, is now found only on the mountains of the temperate zone, the highest summits of which are inhabited by the ibex, and the œgagrus, both species of wild goats. The hare extends from the polar circle to the 64th degree. The ass does not bear the cold so well, and is not found above the 60th parallel. The onager and the dshiggetai, a species of wild mule, are found in central Asia. The domestic swine reaches the 64th degree; but the wild animal never extends above the 60th in Europe, and the 50th in America. The latter animal was found even in the islands of the Pacific on their first discovery. The domestic cat extends in the Old World, from Iceland to the Cape of Good Hope; and in America, to Patagonia; but the wild animal is less widely spread. It is a remarkable circumstance in the history of the earth, and of mankind, that all the animals which have been domesticated by man from time immemorial, are nowhere found in hordes but in Higher Asia. The same conformation of covering, suited to the climate, holds among quadrupeds as among birds. The sheep, goats, hares, dogs, and cows, of the Trans-Himalayan region, are all clothed with a very fine thick fur coat, below their usual covering of hair; without this necessary and bountiful addition, these animals could not resist the intense cold of that lofty region. Of all wild animals, the fox is perhaps the most extensively distributed, and most easily assimilates to every climate. We find vast troops of foxes in Nova Zembla, and along the Asiatic shores of the Icy Sea, as well as in Bengal, Egypt, and Guinea; in the most northern parts of Greenland; in Mexico, Peru, and Magellan. The bear is found up to the 60th degree of north latitude, as well as in the southern latitudes of Java, Siam, and Ceylon. In the New World, we meet with him from Canada to the straits of Magellan. The hare is very widely spread, extending from Madagascar to Ceylon, and Anatolia to China, and enduring the heat of Senegambia, and the cold of Hudson's Bay. The rabbit cannot endure the climate of Sweden, and has certainly been conveyed by colonists from the more temperate districts of Europe to the New Continent. The stag is found in both continents, from Hudson's Bay to Mexico; and in Europe up to the 64th, and Asia to the 60th degree. It has been conveyed to the mountains from Europe, and is said to exist in Barbary and Guinea. The roe is found in most of the countries of Europe; and in Asia, from Irkutz to Ceylon. Different opinions are held regarding its existence in Africa; and it has not been ascertained whether it exists in America. The squirrel inhabits every part of Europe and Asia. Its presence in Africa has been ascertained, and in America it is very plentiful. The migration which these animals undertake in Siberia, North America, and Lapland, are very curious. They seem to be driven to this by the want of food, rather than the rigour of the climate. Rats

and mice are properly of European origin; but, as they are intrepid navigators, they have found their way in the ships of Europe, to the most southern parts of the globe; and as they seem to thrive under any climate, excepting that of the very highest north, it has sometimes happened, that man himself has been compelled to relinquish the possession of a district of country to these troublesome parasites. The ermine, or weasel with a black muzzle, is a native of every climate. The seal is found on every coast, both of the northern and southern hemisphere; but most plentifully in the northern seas. It is very remarkable, that this animal is also found in inland lakes; and that not only in salt lakes, such as the Caspian, but in fresh lakes, such as that of Baikal. [11]

Total of all the Productions of the Earth.] The total amount of all the productions of the earth, known and classified by naturalists, however large it may seem, is probably not equal to that of those which are still unknown to us. The list of those already known, increases every year, we give for an example, the lists of the animals in the 1st edition of *Linnæus's System of Nature*, and of the additions made to that list, in the 13th edition of the same work, published by Gmelin:

	1st Edition. Species.	13th Edition. Species.
Mammalia,	230	242
Aves,	946	2568
Amphibia,	292	367
Pisces,	404	807
Insectæ,	3060	7287
Vermes,	1265	3980

In the last edition of his work, Linnæus had not classified more than 8000 species of plants; Adamson has 18,000, and Zimmermann, in 1783, reckoned 28,000 species. During Cook's first voyage, Banks and Solander found, in the space of a few square miles, on the coast of New Zealand, 400 new species of plants; and the two Forsters, during Cook's second voyage, brought 500 new species from the Australian islands. Our knowledge of nature has been still more enlarged by the new discoveries of Alexander von Humboldt, Count Hofmannsig, and the Prince of Neuwied. We may now estimate the amount of the known species of animals at between 18,000 and 20,000; nevertheless, the number of unknown

[11] European zoologists generally assert that the American continent diminishes the size, and deteriorates the qualities of all animals, both native and imported. The error of this representation, however, stands conspicuous in the following comparative statement:—the weight of animals in Europe, was furnished by Buffon; that of the American animals is taken from the *History of Vermont*, by the Rev. Dr. Williams.

	Weight in Europe. lb.	oz.	Weight in America. lb.	oz.
The Bear,	153	7	456	0
Wolf,	69	8	92	0
Deer,	288	8	308	0
Red Fox,	13	5	20	0
Porcupine,	2	2	16	0
Martin,	1	9	5	4
Pole-cat,	3	3	7	8
Hare,	7	6	8	0
Rabbit,	3	4	7	0
Weasel,	2	2	12	0
Ermine,	8	2	14	0
Flying Squirrel,	2	2	10	0
Beaver,	18	5	63	8

animals must be still very considerable, if we reflect on the innumerable difficulties which oppose the researches of naturalists, even in those countries best known to them; not to mention the extensive regions which are still unexplored, and the bottom of the ocean, which leaves an immense field to the imagination. Zimmermann believes, that the total amount of the animal kingdom on land, in the sea, and air, may be reckoned at nearly 7 millions of species; and the same eminent philosopher believes, that there are about 175,000 species of plants known or unknown. The poorest of the three kingdoms is that of minerals. Naturalists have not yet reckoned above 500 species of minerals, and Zimmermann believes that there may perhaps exist half as many still unknown.

Man, Physically considered.] Man, the noblest inhabitant of the globe, whose organization, senses, and faculties, place him at the head of the various orders of living nature,—is, nevertheless, subject to those laws of generation, growth, distribution, and dissolution, which the Almighty Creator has imposed upon all organized beings. Some naturalists have indeed, attempted to classify 'the human form divine,' with the species of lower animals most nearly approaching it in figure; but the researches of anatomists and physiologists, contradict the monstrous supposition as powerfully as reason itself. Man forms in the scale of being an insulated order, which contains no more than one genus and one species; men differ among themselves in many respects, but in no specific character. The dwarfish Laplander, and the stately Albanian,—the dark Creole, and the fair Dane,—the woolly-headed negro, and the flaxen-locked Scandinavian,—are all varieties of the same race, tribes of the same species, members of one great family, the descendants of one common ancestor, varying from each other in no respect that is not attributable to the accidental circumstance of climate, food, and manner of life. The differences which do exist among mankind at large, in stature, features, and mental qualities, are exactly analogous to those which exist in families, and unquestionably result from similar causes, rendered general and permanent in their operation, by the circumstances we have mentioned.[15]

There was a time, when it was considered impossible for man to exist anywhere beyond the limits of the temperate zones. The ancients imagined that the torrid zone could present no other appearance than that of a vast uninhabitable desert, where the heat of the sun's rays annihilated life in every form; the frigid zones they believed to be equally unapproachable by man, on account of the deadly cold which they supposed must exist around the poles. Geographical discoveries at last dispelled this error. Navigators found not only the torrid zone more populous than the temperate zones, but in the neighbourhood of the poles, and upon islands disjoined from all the rest of the world by wide oceans, they beheld mankind multiplying and replenishing the earth. Man, therefore, has the whole earth as his abode; and has been endowed with the power of enduring every climate, either by means of physical adaptation to it, or by the aid of such artificial clothing as his reason enables him to employ.

[15]Buffon contends, that plants and animals degenerate in other climates, and that all the difference in colour, texture of hair, and physical organization in man, are the effect of climate. Kant holds somewhat the same opinion, but contends for the existence of certain predetermining principles, and certain dispositions tending to a particular conformation, which nature has implanted in man, as destined for different climates, to be developed or not, according to his place in the world. The air, sun, and water, produce certain changes of the body only in so far as they cause their seeds or disposition to be developed, but the existence or principles of these seeds, says the German philosopher, is necessary; external agents having no productive power.

His habitations reach to the extreme line of vegetation; and when the land no longer yields the food necessary to his subsistence, he draws it from the polar oceans. In Greenland, the dwellings of the Esquimaux begin under the 80th parallel of latitude; and the bleak shores of Hudson's Bay are provided with human inhabitants. In the other hemispheres, the cold and barren Terra del Fuego supports the Petcheres, who cling to their cheerless home with all that strength of patriotism which the Swiss exhibits towards his own majestic fatherland. Man can, in fact, endure extremes of heat and cold, which no other organized being is found capable of sustaining. Upon the banks of the Senegal, he is seen roaming under the meridian rays of a vertical sun, whose heat causes some fluids to boil; while, in the north-east of Asia, he exists unhurt beneath a temperature which freezes mercury itself. And yet man is possessed of a more subtile and delicate organization than other animals, and is liable to a greater variety of diseases; how beneficent then must those provisions be by which he is enabled to accommodate himself to every climate, and mutually to adapt his necessities and his means to each other!

The number of human beings upon the globe, has been variously estimated at 1,000,000,000, 828,000,000, 650,000,000, and 550,000,000: calculations so much at variance among themselves, as sufficiently to indicate how uncertain and hypothetical all such estimates are. The truth is, our data are still so very imperfect or contradictory, that we can only make a very loose approximation to what may be the probable number of the species alive upon the earth at any given moment of time. Thus, while one statistical writer assigns a population of 27,000,000 to that district of Asia, known by the name of China—another estimates the number of the Chinese nation at 55,000,000—another at 100,000,000—a fourth at 200,000,000—and a fifth at 333,000,000! Equally conflicting and unsatisfactory are the calculations which have been given of the population of other regions; and, with the exception of Europe and North America, we can affirm nothing, and feel ourselves founding upon nothing but the most hypothetical results.

The natural limits of human life seem to be from 80 to 90 years; few men survive the latter period, and the greater part do not even approach the former. Of all new-born infants, one-fourth die in the first year; more than two-fifths do not reach their sixth, and only one half their twenty-second year. In large towns there is almost always, in the same number of deaths, an equal number of individuals of the same age, and the mean duration of human life is found to be between 30 and 40 years; that is, out of 30 or 40 individuals, one dies every year. Supposing then that there are 1,000,000,000 of human beings alive at one time upon the surface of the globe, according to this law, 33,333,333 will die every year; 91,322 every day; 3805 every hour; 63 every minute; and 21 every 20 seconds. It is believed, that the mortality is much greater in towns than in the country. According to Price, the mortality bills of large towns in England exhibit the proportion of 1 to 23, and in some cases, of 1 to 19 in the proportion of deaths; in the small towns it is 1 to 28; and, in the country, only 1 in 40 or 50. Doubtless, the free and pure air of the country, with the more wholesome condition in which alimentary substances are usually presented to us in that situation, must render a rural life, generally speaking, more healthy than a town one; but, if we take into consideration the sedentary nature of the occupations usually followed in large cities, and the extraordinary mortality in their large hospitals, we shall have reason

to conclude, that the difference in degree of absolute healthiness is not so very great betwixt the two situations.

In the ordinary course of nature, the number of births must exceed that of deaths in every country, otherwise it would soon become depopulated. The proportion betwixt the two varies with the situation; but it is remarkable that the most healthy climate is not that in which there are most children born. The women of Sologne,—a country by no means healthful—are remarkable for their fecundity. The proportion of the number of births diminishes in any country as the population increases upon the means of subsistence; political and moral causes will also materially affect the number of births in any country. In some countries the proportion of births to the number of the living population is as 1 to 22; and in others as 1 to 32—the average consequently is as 1 to 27. Therefore, adopting this calculation, in 1,000,000,000 of human beings there will be 37,037,037 births in a year; 101,471 in a day; 4,228 in an hour; and 70 in a minute; or, to make use of smaller numbers, there will annually be 100 deaths, and 110 births, in a community of 3000 individuals. The whole population of the earth, upon this supposition, would in one year increase 3,700,000. Euler has constructed the following table, by means of which we may see at a glance in how many years the population of a country may be doubled, under certain conditions:—

In a Country of 100,000 *inhabitants, the Mortality being* 1 *in* 36.

The deaths being to the births, as,	The surplus of births will be	This surplus will make of the sum of the living	The doubling of the population will take place in
10 to 11	277	$\frac{1}{361}$	$250\frac{1}{12}$ years
—— 12	555	$\frac{1}{180}$	125
—— 13	722	$\frac{1}{138}$	96
—— 14	1100	$\frac{1}{90}$	$62\frac{3}{4}$
—— 15	1388	$\frac{1}{72}$	$50\frac{1}{4}$
—— 16	1666	$\frac{1}{60}$	42
—— 17	1943	$\frac{1}{51}$	$35\frac{3}{4}$
—— 18	2221	$\frac{1}{45}$	$31\frac{2}{3}$
—— 19	2499	$\frac{1}{40}$	28
—— 20	2777	$\frac{1}{36}$	$25\frac{3}{10}$
—— 22	3332	$\frac{1}{30}$	$21\frac{1}{8}$
—— 25	4165	$\frac{1}{24}$	17
—— 30	5554	$\frac{1}{18}$	$12\frac{4}{5}$

Races of Men.] Man belongs to a particular class of beings. There are no different *species* of men, as in most classes of animals; but only different *races*. All differences among men in size, form, or colour, can only be considered as *varieties*, and are, as we have already said, not sufficient to constitute different *species*. The tallest men we know, as a nation, are the Patagonians, between the river Plata and the Straits of Magellan. They are generally above six feet, and, on account of their strong bodily organization, have quite a gigantic appearance. The ancient Germans, whose climate and manner of living was like that of the Patagonians, were also of great stature. The most dwarfish varieties of the species are found within the polar circle and the frigid zone: such are

the Lapps, the Samoyedes, the Ostiakes, the Esquimaux, and the Greenlanders. The stern climate of these inhospitable regions checks the developement not only of man, but of animals and plants. Between these two extremes stand the other nations of the earth, whose average size is not much above five feet.

The features, in which a great variety is observed, constitute another difference between races of men. Not only individuals have a peculiar physiognomy, but even whole nations have characteristic features by which they are to be distinguished from one another.

The most striking difference, however, between tribes of men, is that of colour. It varies from the shining black of ebony, to the dazzling white of alabaster, through all the intermediate shades. The principal colours are white, yellow, brown, copper, dark brown, and black.

These, and many other inexplicable differences, have led philosophers to divide mankind into different races. We will here notice the different races into which some German philosophers have divided the human species.

Blumenbach, a celebrated natural philosopher and professor at Göttingen, divides men into five races: viz. 1*st*, The Europeans and Western Asiatics to the Obi, the Caspian Sea, and the Ganges, including also the Northern Africans to the Senegal and Niger; they are white, and, according to our ideas, the most beautiful variety of the species. 2*d*, The rest of the Asiatics, and the most northern Americans to about Alashka and Labrador; they are of a yellowish brown colour, with a flat countenance and narrow eyes. 3*d*, The rest of the Africans; they are black, with the lower part of the countenance prominent; and have in general thick lips, an obtuse nose, and woolly hair. 4*th*, The rest of the Americans; they are, for the most part, of a copper colour, with straight hair, and variously formed heads sometimes produced by artificial means. 5*th*, The Australians, or inhabitants of the islands of the Pacific; they are, for the most part, dark brown, with large noses and mouths, thick hair, and strongly marked features.

Kant admits only four races: viz. 1*st*, The Northern Europeans, who are very fair, on account of the damp cold climate. 2*d*, The Americans, who are copper-coloured, on account of their dry cold climate; to which race also the Calmucs are held to belong. 3*d*, The Negroes, who are black, on account of the dry heat of their countries. 4*th*, The Indians, beyond the Ganges, who are olive-coloured, on account of the damp heat of their district.

However, all these differences, or conformities, in shape and colour, are not sufficient for tracing the derivation of one nation from another, or the degree in which they have been mixed with one another. For they depend too much on the accidental or variable causes of climate, food, and manner of living; and often even of customs or other local reasons. European features are even to be met with among the nations most different from them. On the coast of Malabar, in the East Indies, the Jews are almost changed into Negroes; and the same may be said of the Portuguese in Senegambia. In researches, therefore, into the affiliation of nations, we must pay attention to other circumstances, besides those of physical features: namely, to their language, and their history.

CHAP. V.—OF THE REVOLUTIONS WHICH HAVE TAKEN PLACE UPON THE SURFACE OF THE EARTH.

"The existence of the material world," it has been well-observed by Malte Brun, "is only a series of metamorphoses. As in the ocean, wave sinks into and blends with wave, so the elements, agitated by a never-ceasing motion, mingle and combine, and replace each other under forms continually changing, and continually renewed." Of these changes there are some which have taken place instantaneously; there are others whose imperceptible progress only marks the silent but resistless power of time.

Earthquakes.] By far the most dreadful agents in producing extensive changes upon the surface of our globe are those convulsive movements or shakings of the earth which have so often devastated the fairest regions, and overturned the proudest monuments of human industry and genius. The Italians—who are but too well-acquainted with this terrible phenomenon—distinguish three kinds of motion in the earthquake:—*1st*, The *horizontal* motion, consisting in undulated vibrations of the earth, similar to those of the sea, as in the earthquake at Lisbon, in which these undulations, or waves of the earth, followed each other at a distance of about 10 feet; *2d*, The *vertical* motion, in which the shaking goes upwards, and the surface of the earth is at one place lifted up and at another sunk down as into a gulf; and *3d*, The *whirling* or *circular* motion. These different kinds of earthquakes may all proceed from the same cause. The effects of an earthquake are awful, and often change the appearance of a country in such a manner that it becomes difficult to recognise it. Enormous abysses and ravines are suddenly formed; mountains are overthrown; whole countries sink under the ground; islands rise out of the sea; flames break forth out of the fissures of the earth; and all this is effected with inconceivable quickness. A single shock, on the 5th of February, 1783, devastated the whole plain of Calabria, and destroyed the town of Messina, in less than two minutes, though the agitations were repeated for a space of several months. What renders their effects more melancholy is, that there are but few unequivocal indications of the approach of an earthquake, and none of the termination of it. They happen at all seasons, and under every constitution of the atmosphere. Some countries are indeed more liable to earthquakes than others; which is the case not only with those in the neighbourhood of which a volcano is to be found, as in the lower part of Italy, and the countries of Japan and Peru, but also with those at a great distance from volcanoes, such as Hungary.[16] Frequently they are announced by a hollow subter-

[16] The town of Benevento, in Italy, has been very frequently visited by earthquakes. The first which history mentions happened A. D. 396, under the bishop Sinianus; the second took place in the year 845, under the bishop John and the Lombardian prince Radelgis; a third happened in the year 996, under the Greeks; a fourth in 1125, under Pope Honorius II.; the fifth was felt in 1138, on the 22d of January, under the archbishop Gregory; the sixth on the 6th of February, 1456, under the archbishop Jacob de Ratta; the seventh earthquake happened in 1627, on the 3d of July; the eighth, and most dreadful of all, took place on the 5th of July, 1688, when about 1367 persons were killed in the city alone; the last, which was almost equal in its destructive effects to the former, occurred on the 14th of March, 1702, under the archbishop Orsini. The southern part of Portugal, especially Lisbon and the surrounding country, has at all times been extremely subject to earthquakes. They happen usually between October and April, after a season of great drought and oppressive heat. In the works of Francisco Tavare, a Portuguese physician, we find the following notice of the principal earth-

ranean noise; but the dreadful sound is scarcely heard before the earth gives way beneath our feet. A few animals, particularly horses, goats, and fowls, appear to have a presentiment of the approach of an earthquake, and the barometer sometimes falls extremely low before its occurrence. During the earthquake, there is either a central point of action observed, where the quakings are strongest, and which sometimes changes its place, or the shaking power moves along a certain line. The earthquake of 1755 was felt from Greenland to the West Indies, and from Norway to Africa. In 1601, an earthquake shook almost the whole of Europe, and a part of Asia. Nor are the frigid zones free from such revolutions. On the 25th of December, 1758, a strong earthquake shook a part of Lapland; and Greenland has often been visited by this phenomenon. We have already instanced a variety of these catastrophes; but their causes are yet unknown. There are perhaps several concurring yet quite different causes. Slight shocks may be produced by the sudden sinking of the ground into hollows in the interior of the earth. Some philosophers have ascribed earthquakes to a disturbance in the equilibrium of terrestrial and atmospherical electricity, as they are sometimes attended by electrical phenomena. This is however not always the case: at the earthquake in Calabria, no trace of electricity was perceived. Other philosophers have endeavoured to find the cause in a sudden change in the direction of gravity in any district. It is believed, with more probability, that air, or elastic vapours, shut up in subterranean caves, may have the greatest share in the production of earthquakes, by their expansion through heat, and the motions and explosions thus produced. The celebrated earthquake of 1783 seems, according to the opinion of well-informed philosophers, to have been produced by elastic vapours which had been formed in the interior of mount Etna by the water collected during the preceding rainy winter in the subterranean caves, and which being transformed into steam by the internal heat, sought an outlet in this manner.

Volcanoes.] Volcanoes are closely connected with earthquakes, for all volcanic eruptions are accompanied by earthquakes, and by these eruptions the convulsive motions of the earth lose their force, or cease altogether. Both seem to arise from common causes; and, though there are many earthquakes during which no vapours or any other outward signs of a subterranean fire appear, yet it does not follow that these are totally absent. The eruption of air, or of fire, may be unobserved, because it may happen in distant seas. A trembling of the earth usually precedes the eruption, which is accompanied by a deep-toned thunder coming from

quakes under which the city of Lisbon has suffered:—Those in the years 370 and 377 B. C. were very violent. Those of A. D. 1009, 1117, 1146, and 1290, were very strong, and some almost reduced the town to ashes. That of the 24th August, 1356, lasted, with several intervals, during a quarter of an hour, and many other shocks followed during the year. That of the 1st of January, 1351, was one of the most violent, and did immense damage. Other shocks followed it during the space of eight days. That of the 27th July, 1575, was violent, but did no harm. That of the 28th July, 1597, destroyed three streets, on mount St Catherine, and split that mountain through. That of the 22d July, 1598, threw down men walking on the streets. That of the 27th October, 1699, lasted, with several intervals, during three days, and was very violent. That of the 12th October, 1724, was very strong, but did no harm. The earthquake of the 1st of November, 1755, overthrew half of the town, and the shocks lasted during eight days. Those of the 30th April, 1761, of the 10th and 17th January, 1796, and 6th June, 1807, were violent, but did no great harm. From the number of earthquakes and mineral springs in Portugal, one would be led to think that Portugal lies on an unextinguished volcano, which thus, from time to time, announces its existence by more or less violent shocks.

the bowels of the earth, and a howling noise which fills the air. A mountain rises out of a plain, or out of the bottom of the sea; or a new mountain is raised on the top of another already existing; the subterranean fire forms for itself an outlet or chimney, proportioned to its immense size, and in the form of a cone; the top of the cone opens; thick clouds of smoke and vapour, in which flashes of lightning appear from time to time, shoot up to the skies; flames break out on every side; stones and large rocks are hurled upwards with prodigious force, and thrown to the distance of several miles; the burning ashes emitted, obscure the sun, and fall like a fiery rain on the surrounding country, or are carried by the wind for many miles around. At length, the lava rushes out of the crater, or out of newly formed openings; great torrents of melted minerals, which have been heated for many years, or of boiling water, burst forth, and with irresistible power spread death and destruction in their course; day is turned to night, and night to day; cities are reduced to ashes; valleys filled up; and blooming countries changed into frightful deserts. Yet, amidst all this desolation, a new paradise soon blooms again; for the lava, dissolved by the exposure to the air, becomes itself the most fertile of soils, and its uncommon fecundity inspires the inhabitants with a dangerous attachment to their charming but fearful country. These eruptions, however, are not always so destructive; a volcano does not rage always, or periodically at fixed times. Sometimes they are quiet for many years. During this period only smoke arises from time to time, accompanied by a hollow sound, until inflammatory materials have again been collected in sufficient quantity in the interior of the mountain to create a fresh eruption; or until the eruptive matter is all consumed, when the volcano is extinguished, and the crater filled up by degrees is hardly to be seen. There are still many burning mountains, as already noticed, and they are scattered about the whole earth, especially upon islands, or in the vicinity at least of the sea. But undeniable proofs of a far greater number of extinguished volcanoes, are found in many countries of the earth. Many mountains and islands owe their existence entirely to volcanic eruptions, while others have been swallowed up by earthquakes. Thus, in the year 196, B. C. there arose in the Archipelago, near Santorin, a new island, which was increased in the 8th and 15th centuries by sudden accessions of alluvial matter from the bottom of the sea, although in that place it appeared unfathomable. Near this island, two new ones arose in the 1st century; in 1573, another: in 1650, another, nearly to the level of the water; and, at length, in the year 1707, a sixth island. At the same time, the one which had arisen in 1573, almost entirely disappeared. Two islands rose out of the sea near Terceira, one of the Azores, in the years 1638 and 1720; the last has by degrees sunk altogether. In the tremendous eruption which raged in 1783 in Iceland, an island rose out of the sea at about 70 miles from land, but the ocean has again swallowed it. History notices about thirty islands which have thus arisen, in the sight of men, out of the sea; and many more may have arisen in the immense ocean, without having been seen. Many islands bear visible marks of a similar origin, at a date antecedent to authentic history. Such are those of Santorin, Rhodes, Milo, and Delos, in the Archipelago; the island of Madeira; some of the Canaries, and Cape Verd islands; and those of Goree, and Nantuket. It appears from the concurrent testimony of all preceding navigators, as well as the late Russian navigator Kotzebue, who explored the Pacific Ocean recently in various directions, that a constant formation of new islands is

going on in the great Pacific Ocean, through the combined efforts of volcanic agency, and the production of coral reefs of rocks. From the Philippine islands to the Moluccas, the formation is almost entirely volcanic, while the small islands to the southward of New Guinea are almost entirely produced by the astonishing operations of that minute animal the coral-insect. From the conjunction of these causes it is fair to expect that a few centuries will add to the work of creation, by the formation of an extensive continent to the south-east portion of the globe.

Natural philosophers are not agreed, as yet, on the causes of volcanic phenomena, and the true places where they originate. Some believe, that volcanic fire is of the same quality with the fire of combustible minerals, and that it is produced by them. The hearth, or place of combustion, they conceive, lies not very deep under the surface of the earth, above the lowest strata known to us, namely, the granite. According to their theory, the pyrites of sulphur—which, when in considerable quantity, and exposed to contact with air and moisture, get so much heatened as to break out in flames—are the first tinder, and the mines of coal and slate are the fuel of the volcanoes; the explosion is the effect of the expansion of the internal air, or of water falling upon the minerals which are in fusion. Other philosophers suppose that the fire of volcanoes—as seems to be clear, from the quality of the volcanic productions—is of a peculiar kind, and quite different from all known species; that it must, from the extent of its effects, be much deeper sunk into the earth; and, that the mineral substances burning there, are quite unknown to us, and will perhaps remain so for ever.

Muddy Eruptions.] Those mountains which, instead of fire and smoke, throw up mud, are too small in number to be counted among the phenomena producing a change upon the surface of the earth; though they may serve as a proof that nature may in this manner also act upon the surface of our globe, and has, perhaps, formerly acted in a stronger manner. Maccaluba, in Sicily, is the most celebrated among the terrivomous mountains. Not far from Boulogne, several quagmires called the *Salses*, situated on rising grounds, composed of saline and alkaline earths, exhibit on a small scale similar phenomena.

Action of Water.] Water is an agent not less active than fire in changing the surface of the earth. The sea, especially, is constantly operating changes upon the land. The most terrible phenomena of this class, are those immense floods or inroads of the sea, which sometimes swallow large tracts of land. The Zuyder sea was formerly a small inland lake, formed by an arm of the Rhine; but, in the 13th century, the sea covered a large part of the surrounding continent, and formed this basin. In 1421, the sea swallowed in one night, 72 villages, with 100,000 inhabitants in the neighbourhood of Dordrecht, and changed the whole surrounding country into a lake. In the same manner, the Dollart, near East-Friesland, was formed in the 13th century, by the sea overflowing a well cultivated tract of land. Much of the western coast of Sleswick has been swallowed by the sea. The island of Norstrand was buried in 1634 almost entirely by the waters; and of Helgoland nothing remains but the rocks. Many more events like these may have happened in ancient times, which are not recorded in history. Several straits bear evident traces of the sea having broken through them; and many groups of islands have visibly been torn from one another by the action of the waves. Between Calais and Dover, an isthmus probably existed in former times,

which has been broken through by the waters; for the soil rises on both sides, forming a kind of dyke, exhibiting corresponding strata, and the ridge of mountains which in France terminates at Calais, rises at the point of land in Kent, in the same direction, and contains the same minerals, according to Desmarets. The three straits which lead from the Ocean into the Baltic, have probably been formed by the breaking through of the sea, as the name seems to show; for the old national word *Belt*, still signifies, in Friesland, an inroad of the sea. It was believed by the ancients, that Sicily had in former times been connected with Calabria, and afterwards severed from it by the waves. According to an old tradition, which seems to be confirmed by the existence of the rock called *Adam's bridge*, Ceylon was formerly connected with Coromandel; and there is no probability that the straits of the Dardanelles, of Constantinople, and of Gibraltar, originally existed in their present state. Most likely America, too, was connected formerly with Asia by a natural bridge, over which the first inhabitants came, and which was afterwards destroyed by the waves. The indented outline of almost all coasts, and the situation of most islands, bear distinct marks of violent disruption by the action of water.

Besides these violent changes produced by the sea, others not less important are made in an almost imperceptible manner, by the gradual increase and diminishing of the sea, which is only visible after a long series of years. This is seen, for instance, on the northern coasts of the Baltic, especially at the Bothnian Gulph. The sea has there retired a great way from several maritime towns; anchors, and wrecks of ships being found at great heights; and canals, fifty years ago navigable for large vessels, being now only made use of by shoal boats. The same phenomenon exists in the Atlantic and the Mediterranean; and the sea is retiring gradually from Iceland. The Adriatic presents striking examples of the same kind. On the whole coast of the Arabian Gulph, distinct traces are found of the sea having retired, and the same is the case on the coast of Lima. In many instances, this phenomenon may be caused by the gradual elevation of the soil; in others, it is manifestly owing to the retiring of the sea. In some places the sea increases gradually, and makes inroads in the land; as, for example, on the southern coasts of the Baltic; on the N. E. coasts of the Adriatic, and on the E. coasts of N. America. In other cases, the sea throws up sand and mud on the low coasts, which, when heaped up like hills, form *downs*. Rivers also produce considerable changes upon the surface of the earth. The rain washes the soil from the top of a mountain, and brings it down to the valley beneath, by which the one is lowered, and the other heightened. In their course rivers carry the land from one side, and deposit it on the other, or on shallow places, which produce islands. By acting with greater force on one side, or by heaping up sand or mud, a river forms a new bed, and changes its course, this has been the case with the Rhine in several places where the old bed is still seen. Islands are frequently formed at the mouth of large rivers. Thus, the extensive and rich Delta in Egypt, which was in very ancient times a basin or gulf of the sea, has been entirely formed by the mud carried down by the Nile.[17]

[17] All rivers, from the least to the greatest, waft earth to the sea, and that in proportion to their magnitude, velocity, and length of course, combined with the nature of the soil which forms the beds or banks, and with the rains, which, in proportion to their violence, and the degree of slope of the higher grounds, wash down the soil

Action of the Atmosphere.] The air is not less active than water in producing changes; and if its action is sometimes less striking, it is not less certain. One of the most common phenomena of this class, is the process of decomposition by which a solid mass of rock is changed into a number of loose stones, and those again into gravel and sand, which is easily carried away by the action of wind and water. The quick or moving sands are the plague of many countries; whole mountains have been

into the nearest stream. It is but of late that the attention of philosophers has been drawn to this subject. The deposition of mud made by the inundations of the Nile, and the consequent elevation of the soil in Egypt, had been long known to the ancients; and the same facts were observed in later times in the case of other rivers, such as the Ganges, the Mississippi, the Orinoco, and others; but little inquiry till very recently was made, either as to the cause or the degree of progress of these depositions. Shaw estimated the quantity of mud brought down by the Nile at about the 120th part of the volume of water which it carries into the sea. Now, suppose a volume of water 40 feet deep, and 2,100 feet wide, moving at the rate of 4 miles an hour: the cubical volume moved in that space of time will be 1,774,080,000 feet, which divided by 120, gives 14,784,000 cubical feet, the quantum of earth hourly carried to the sea by the Nile during the period of its inundations. Yet, notwithstanding this enormous discharge of alluvial matter, the progressive increase of the Delta is by no means great. Gerard found the increase of soil in Upper Egypt to be only 6½ feet since the Christian era, or 4 inches in a century, and the increase along the coast since the days of Herodotus, or 2,200 years, not to exceed a mile and a quarter. Mr Barrow, estimating the quantity of earth wafted to the sea by the Hoangho at a 200dth part of its cubical volume, infers that there must be an annual addition made to the coasts of the Yellow Sea, at the mouth of that river, of about 5 miles, so that allowing the age of the world to be 6000 years, the Hoangho should have converted 30,000 square miles of sea into *terra firma*. But this is as little the case, as that the Nile—though carrying down a still greater quantity of mud to the sea—has made any very great addition to the African continent. What an amazing quantity of sediment must hourly, daily, monthly, and annually, be wafted down the ocean flood of the Maranon, which is greater in volume than all the rivers of continental Europe put together! Yet we hear of no delta, or remarkable increase of land at its mouth. Calculating the quantity of water discharged by the Mississippi at 3,294,720,000 cubical feet per hour: that quantity divided by 200, for the proportional quantity of alluvium, will give 16,473,600 feet per hour, or eight times and upwards the quantity wafted by the Hoangho; and even allowing the velocity of only one mile per hour, still the quantity discharged would be four times as much. And it must be remembered that this is mere earth, independent of the amazing quantity of trees, logs, and drift-wood, hourly hurried down by it into the ocean. A theorist would be apt enough to infer from this that the Gulf of Mexico would be filled up in a shorter time than the Yellow Sea, according to Barrow. Now, what is the fact? We are informed by Warden that the annual rate of increase at the mouth of its principal branch is 300 feet annually, or a mile in 18 years, and 2 leagues along the coast. But this increase, if equally distributed over its delta, would not raise it above 2 or 3 feet in a year;—a quantity, however, much greater than in the delta of the Nile, as might naturally be expected from the superior size of the stream. Supposing Barrow's hypothesis of a square mile added every 70 days, and 120 feet deep, this would give 5 3-14ths such miles annually, and 521 in a century. Now, a river which even in its lowest state conveys 8 times as much alluvial matter as the Hoangho, over and above an immense quantity of drift-wood, should enlarge the coast as much in 12½ years as the deposition of the Chinese river do in a century, or add 521 square miles to its delta. But we find the rate of increase to be vastly slower. The fact is, the process of filling up sea and raising land, was far more rapid in the earlier period of the world than now. It is quite evident that the longer rivers continue to run, the less quantity of earth they will carry away with them. It must also be kept in mind that the more the land gains upon the sea, the latter proportionally gains in depth, and therefore the process of increase must be continually declining on both these accounts. The increasing land is always going into deeper water. As an instance of this, the shores of the coast of Egypt are deep; and if, even with a depth of 10 or 12 fathoms, the progressive increase of the Egyptian Delta has been so slow, how much more slow must be the progress of filling up the Yellow Sea, which has a depth of 20 fathoms? "When the detritus of the land," says professor Playfair, "is delivered by the river into the sea, the heaviest parts are deposited first, and the lighter are carried to a greater distance from the shore. The accumulation of matter which would be made in this manner on the coast, is prevented by the farther operation of the tides and currents, in consequence of which the substances deposited continue to be worn away, and are gradually removed farther from the land."

crumbled away, or suddenly destroyed by the combined action of air and water. In 1772, a great part of the Piz, a mountain on the March of Tarviso, fell down and buried three villages. A small river was checked in its course, and thus a lake formed, by which another village was overflown, when a second fall of the mountain in the midst of the lake, produced another much more dangerous inundation, by which several villages were overflown, some of which are even still covered with water. About ten years after this, a part of the mountain of Goima, in the same district, slid gently and slowly into the valley without disturbing the inhabitants of some houses, which were carried along with it in their sleep, who, when they awoke in the morning, were struck with astonishment at finding themselves thus transported from the mountain into the valley. In the valley of the Bagne, in Switzerland, a dreadful inundation was caused in 1809, by the fall of one of the ice-mountains into a stream. The Abbé Anduze relates in *Le Globe*, that as he was one day making the best of his way over a mountain in the Alleghany range, he suddenly felt the soil move under his feet, and perceived that a tolerably large-sized field, well-covered with trees, was rapidly travelling down towards the plain, whither he quickly arrived without the least inconvenience. These moving landscapes are common in those hills. However, all these united forces, though always active, seem scarcely sufficient to explain the extraordinary accumulation of soil which sometimes takes place in the course of a thousand years, when we find the remains of very old walls, roads, well-preserved trees, and whole forests buried at a great depth beneath the present surface. Sometimes the soil suddenly sinks, which was the case at Fredericshall in Norway, where, in 1702, the house of a nobleman instantaneously sunk 100 fathoms into the ground. But in other places different causes must have acted. Thus, for instance, it was formerly necessary to mount eight steps to enter the Pantheon at Rome, but it is now necessary to descend as many. Has the building sunk so many feet, or has the soil been gradually elevated as much? The latter is thought most probable; perhaps both has happened.

Labours of Man.] Man also is incessantly changing the surface of the earth. He roots out forests, drains morasses and lakes, regulates the course of the rivers, checks the progress of the sea by dykes, digs canals, cultivates deserts, forces the soil to produce what he needs for his sustenance, and transplants at pleasure the productions of the most distant countries into new situations.

CHAP. VI.—HISTORY OF THE EARTH.

GEOLOGY embraces the consideration of the materials of which this globe is composed, and the circumstances peculiar to its original formation, as well as the different states under which it has existed, and the various changes which it has undergone. It is yet a speculative science, and promises no certain results. For, from the very limited depth within which our actual examinations have been made, our facts and real observations are confined to a small part of what may be considered as merely the crust of the globe. With respect to its more internal part, we have hitherto only been aided by conjecture, which has too frequently led to theories the most extravagant and absurd. As long as the interior of the globe remains unknown to us, the conclusions which we may attempt to

draw from facts observed on the surface can be no more than probable, and as such incapable of generalization. Neither are geologists entitled to lay hold of the hypothetical principles which have been advanced in natural philosophy and chemistry, and to make use of them in supporting their theories, as if they were agents perfectly known. We neither know the agents nor the processes which nature employs in the greater number of her operations. How vain, then, must be the attempt to form a primitive history of the globe !—to trace the immense chain of those operations, the last link of which is attached to the throne of the invisible God ! A brief review of the various systems hitherto proposed by geologists leads to the same conclusion regarding the utter impotence of the human faculties in every attempt to fathom the system of creation.

Omitting to notice the Scriptural account of the creation of the world, for the reason that the brevity of the narration precludes any systematic arrangement of the events there related, we shall only generally remark here that the most prominent circumstances related by the inspired historian have been repeatedly confirmed and inferred by the most learned of those philosophers, who have endeavoured, from a view of the present state of the world, and of the various changes which it has undergone, to form some conjectures with respect to its original formation. In fine, the researches of philosophy have bowed with submission to the testimony of inspiration.

Ideas of the Egyptians.] From the very imperfect accounts which have reached us, of the doctrines of the Egyptian philosophers on this subject, we can only learn that they were of opinion, that at the beginning the ocean had covered the whole surface of the world. These waters, it was supposed, were now concealed in vast cavities existing in the interior of the globe, from which they were still ready to issue and produce the most extensive inundations. The axis of the globe they believed to have been originally parallel with that of the plane of its orbit ; and whilst it remained thus, they supposed that a perpetual spring existed; but that, on its *inclining*, an alteration of seasons took place. Thales imported the Egyptian system into Greece, and it was possibly that of all the ancient Greek poets and mythologists.

Opinion of the Chaldeans and Indians.] The Chaldeans are said by Diodorus Siculus to have held the same opinion as the Egyptians, but they also supposed the existence of a central fluid similar to the atmosphere ; they believed the earth to be hollow ; and that, in the early ages of the earth's formation, a perpetual spring existed. The Indians also supposed the existence of a vast abyss in the centre of the earth, for the reception of the water which remained after the consolidation of the external crust ; they also held the tradition of a general deluge, and a subsequent retiring of the waters.

Philosophy of atoms and Greek Theories.] The opinions of Democritus and Epicurus, as delivered to us by Lucretius, appear to have been, that by the separation and appropriate re-union of accordant atoms, or corpuscles, which prefer and attract each other in virtue of their similar nature, the different elements were formed, which, by the regulating influence of gravity, were separated from each other, and disposed in their allotted regions. One of the results of this process—in which we recognise the fundamental principles of our theory of chemical affinities—was the formation of the earth itself. The descriptions which Lucretius, Virgil, and Ovid give us of the first formation of the terrestrial globe, contain all the

principal ideas of the modern Neptunists, namely, solution in a vast fluid,—chemical precipitation by attraction or affinity,—mechanical precipitation,—and consolidation. Several other hypotheses of the formation of the world, and the successive changes which have brought it to its present state, deserve rather to be regarded as ingeniously devised allegories, than as attempts at philosophical reasoning; still we may discover among the ancient Greeks the germ of all the theories of modern geology.

Theory of Descartes, 1670.] Descartes conceived that this globe might originally have been composed like the sun, of the pure element of fire; but that, by degrees, its less subtle parts had gradually collected together, and formed thick and obscure masses at its surface, similar to those accumulations which occasion the spots which we see on the sun. From the gradual but complete incrustation thus formed, he supposed that the whole planet at length became covered and obfusicated,—that, in this manner, different crusts were formed,—and that, from the falling of parts of the exterior crust into the cavity beneath, the irregularities of the earth's surface were produced.

Theory of Leibnitz, 1683.] To this bold hypothesis of Descartes that of Leibnitz very nearly approaches. He supposed the crust, of which we have just spoken, to have been of a vitreous nature, the minute fragments of which are the sand that is every where so abundant: an idea quite untenable, although Buffon has been carried away by it.

System of Buffon.] The affinity of our earth to the sun, has been strictly asserted by Buffon, who supposes the planets, and among the rest our earth, to be particles struck off from the sun by a comet about 96,000 years ago, and hurled into the immensity of space, where, from their rotatory motion, they acquired a spherical form. This burning, once heated to an intensity which no figures can describe, and no imagination conceive, only by degrees cooled and acquired solidity,—retaining, however, many immense cavities,—and by degrees still more slow became adapted for the existence of vegetables and living creatures, which started first into being about the pole, and gradually spread themselves towards the equatorial regions. Our author's mineral system explains this process; and his theory, though now refuted in all its principal points, is certainly one of the most sublime exertions of an ingenious mind.

System of Burnet, 1681.] Dr Burnet, whose system manifests a considerable portion both of ingenuity and judgment, supposes the earth to have originally been a fluid mass, the component parts of which became arranged according to their gravity; hence the heaviest matters were deposited at the centre, and above them were disposed in concentric layers, the lighter substances, in the order of their respective gravity. The water every where occupied the surface, and was itself enveloped by an unctuous matter, above which existed the circumambient air. By the subsequent intermixture of the oily and earthy matters, and other arrangements of its several component parts, the crust of the earth acquired a smooth form, and obtained those qualities which were necessary for the existence of organized beings. At this period the axis of the globe was supposed to be parallel with that of its orbit, the days and nights to be equal in length, and a uniform season to have existed in which the antediluvian generations enjoyed a perpetual spring. But on the crust of the earth drying, from the ardency of the heat, it became violently rent asunder, fell in, and gave outlet to the vast abyss of waters beneath. Hence the axis of the globe became inclined, occasioning those changes of the seasons, and of the

length of the days and nights, which now exist; and thus also were produced the beds of the ocean, with the valleys and the numerous mountainous elevations.

System of Whiston, 1708.] Mr Whiston conjectured that the earth was originally a comet, which, at the period mentioned in the Mosaic account as that of the creation of the world, had its orbit rendered nearly circular, and such an arrangement formed of its component parts as made it fit for the existence of the vegetable and animal creation. Having existed in this state its allotted time, he supposes a comet to have passed so near to the earth as to have involved it in the vapours forming its tail, which being condensed, fell in torrents, and executed the will of the Creator, by producing the deluge described by Moses; the action of the comet on the earth itself, having been sufficient to produce, at the same time, those irregularities of its surface, which form chains of mountains, and the vast beds of the ocean. This hypothesis of Whiston has often been revived in whole or in part. Dolomieu has borrowed from it his principal ideas.

Ideas of Pallas, 1791.] M. Pallas having assumed the formation of the sea and the primitive rocks, supposed, that, with the sand produced by their constant disintegration, the sea must have deposited such inflammable and ferruginous matters as being deposited in beds on the granite would form the fuel of volcanoes; these raising and bursting the solid beds under which they had existed, and which they must have altered by fusion or calcination, would raise up the mountains of schist and of limestone. The shores of the sea being gradually augmented, and the sea being diminished and driven back whilst its bed was raised in different parts by the power of volcanoes, the formation of the mountains containing petrifactions would take place. Lastly, he supposed that, after the earth had been well-stocked with vegetables and animals, by some enormous eruptions at the bottom of the sea, its waters may have been made to inundate the whole horizontal surface of the earth, and even to cover those mountains which do not exceed one hundred toises in height.

System of Hutton.] The system of Dr Hutton resembles, in many points, that which has been just noticed; but its several parts are better connected; and it certainly possesses—although in its tendency it is highly exceptionable—a more prepossessing appearance: since it ascribes the formation of continents, mountains, and valleys, not to accidental occurrences, but to the operation of regular and uniform causes, making the decay of one part subservient to the restoration of another by successive reproduction. Thus, he supposes this globe to be regulated by a system of decay and renovation, and that these are effected by certain processes which bear a uniform relation to each other. The solid matter of the earth, especially the rocks and high lands, he supposes to be perpetually separating, by the reiterated action of air and water, and when thus detached, carried down by the streams and rivers and deposited in the beds of the ocean. From these deposites, the various strata of our earth are supposed to be formed, obtaining their consolidation from the action of submarine fires; which being placed at immense depths, must operate on these stratified depositions under the circumstance of vast pressure, by which volatilization must be prevented, and such changes produced as would not otherwise be effected by the power of heat. The expansive power of subterraneous fire is also called in to explain, by the elevation of strata, their various positions. Thus, whilst the ocean is in

one part removed by the accumulation and the elevation of strata, fresh receptacles are forming for it in other spots, where new strata will be deposited, consolidated, and elevated. According to this system, therefore, in the present world—which is made up of the fragments of those which preceded it—the materials are arranging for the formation of a new surface; new worlds are rising at the bottom of the present oceans; and imagination pictures successive lands overwhelmed by successive oceans, and these in turn producing new kingdoms, to be peopled by new nations: the system manifesting, as its author avowed, neither vestige of a beginning, nor prospect of an end.

Woodward's Theory, 1708.] Woodward, with too little attention to facts well-known at the period at which he wrote, supposed that the solid parts of the earth were arranged in strata, according to their degrees of specific gravity; the water which had held them in solution having afterwards retreated to the grand abyss which he supposed to exist in the centre. After some time, God ordained that the crust should break and fall into the abyss, and that the water should cover the surface. By the great solvent powers of this water he supposed that every thing was again dissolved, and afterwards precipitated in concentric layers. The surface was then supposed to have been again broken, by which the waters again reached the centre, and the surface was broken into those inequalities which now exist.

Theory of Deluc, 1770—1810.] Deluc conceived that in the beginning the sun did not exist in a luminous state, and that the earth, not feeling its influence, was frozen; but when the sun, by the Divine will, began to diffuse its rays, the ice on the earth's surface became thawed to the depth of several leagues below the surface; and the dissolved substances were either crystallized or precipitated, and formed the primitive crust of the earth. After this, organised beings were created, many of which became involved in a new strata, which were now formed at the bottom of the ocean; and the thawing of the internal parts of the globe continuing, the external crust lost its support, and sunk into the recesses of the subterranean cavities. This catastrophe was the universal deluge described by Moses. The external waters rushed in to the gulph, and thus caused a considerable diminution of the waters which covered the earth, so that our present continents, formed beneath the ocean, suddenly rose into view, with all their irregularities of surface. In the light lands of these continents were found, buried in promiscuous heaps, the remains of quadrupeds, once the inhabitants of islands which had sunk down before the universal deluge, and the skeletons of cetaceous animals which had peopled the sea. The preservation of these remains, which are still met with almost entire in cold countries, and the inconsiderable thickness of the beds of vegetable mould formed above our continents, unite to prove that their antiquity, or rather their appearance above the waters, is not to be dated many ages beyond our own.

Theory of Saussure.] Led by the observation, that the Alpine Mountains were frequently composed of strata obliquely disposed, Saussure imagined, that the surface of the globe, formed by successive depositions and crystallizations, was originally covered by the ancient ocean; but that the crust bursting by the expansive force of heat, or of elastic fluids, the interior, or primitive parts of the crust, were turned outwards and supported by those of secondary formation. By the rapid retreat of the waters into the cavities thus formed, he accounts for the enormous blocks

now lying in plains far distant from the rocks from which they were separated. After this retreat of the waters, he supposes that plants and animals were formed; and that since that period, several immense currents have been caused by the opening of fresh gulfs, into which the waters have retreated at different periods, the last being that which reduced the waters to their present level.

Ideas of Patrin.] Patrin formed the opinion, that in the beginning, all the matters which now compose the exterior part of the globe were held in solution, or suspension in a fluid; and that, of these, some were deposited in a crystallized state, whilst those which were not in a state of actual solution, formed the different schists and other earthy, saline, and metallic strata, which are found regularly and concentrically disposed. Whilst thus existing in a soft and yielding state, the different substances, by acting on each other, passed into a state of fermentation, necessarily productive of a swelling, or rising up, which taking place first of all in the granite and saline pasty masses, these were elevated, carrying with them or bursting through the other strata, and thus forming the rocks and mountains now existing on the face of the earth.

Kirwan's Theory.] That respectable and excellent mineralogist, Mr Kirwan, has zealously endeavoured to form a system which may accord with the Mosaic account of the creation. He supposes the superficial parts of the globe to have been in a fluid state, being held in solution by water considerably heated. From the coalescing and crystallization of the contents of this solution, the various metallic substances and earths were deposited, in various combinations, forming, according to the predominant proportion of the ingredients, granite, gneiss, porphyry, and the other primeval rocks. By the crystallization of these immense masses, a prodigious quantity of heat was generated, even to incandescence, and the oxygen uniting with inflammable air, occasioned a stupendous conflagration, by which the solid basis on which the chaotic fluid rested was rent to a great extent. From the extrication, by this heat, of the oxygen and nitrogen gases, the atmosphere was formed; and from the union of the oxygen with ignited carbon, carbonic acid proceeded, which being absorbed by calcareous earth, was precipitated in combination with it, forming the primitive limestone. The level of the ancient ocean becoming then lowered to the depth of 9000 feet, fish were created; and the various stratified secondary mountains were formed within it during its retreat and after the creation of fish. Soon after, the higher tracts of land being left uncovered by the retreat of the sea to its bed, the land became supplied with vegetables and animals. The deluge, he considers as a miraculous effusion of water, both from the clouds and from the great abyss, which originated in, and proceeded from, the great southern ocean below the equator, and which rushing into the northern hemisphere, descended southwards, and at length spread over the face of the whole earth.

Delamitherie's Theory, 1798.] M. Delamitherie, who has investigated the subject with much attention, is of opinion, that all the mountains, valleys, and plains, composing the crust of the earth, were formed nearly in the state in which they now exist, by crystallization in the mass of water which surrounded the earth. The matters composing the highest mountains, he maintains, have evidently been held in solution; the water, therefore, must have reached above their summits, and of course, have stood 18,000 feet, at least, above its present level. But this being admitted, it becomes necessary to determine what has become of the immense quantity

of water which has disappeared since that period. Of this, he imagines, that some part has escaped by evaporation, and passed into other planets, but that by far the greatest part is buried in the immense caverns which exist in the interior part of the globe.

Review of the preceding systems.] On reviewing the systems which have been just enumerated, it is obvious that some are so abundant in fanciful conjectures, and so deficient of probability, as not to require any further remark; whilst in others of a more specious appearance, there are some points which cannot be allowed to their ingenious authors. On these particular doubtful points, it is thought best to offer a few remarks, rather than separately examine each system. With respect to crystallization, from an aqueous solution—a supposition which has not yet been generally adopted—it may be remarked, that the primitive mountains and valleys give exactly that irregularity of appearance—lofty needle-like forms shooting up in some parts, and extensive plains existing in others—which is observable in cases of crystallization on the small scale. It has been objected, that the secondary mountains do not every where cover the primary on which they rest: this circumstance must in all probability have depended on particular local circumstances, and especially on such as in ordinary cases of crystallization would direct the formation of crystals more numerously on one spot than another. Particular currents may perhaps be considered among the causes which assisted in producing these effects, as well as in forming particular chains; whilst to the action of contrary currents may be attributed the formation of separate mountains. The formation of secondary mountains seems also to concur with what is generally observed in the ordinary progress of crystallization; where it is observed, that after one series of crystals are formed of the least soluble matters, others are then formed of those substances which the fluid was able to hold still longer in solution.

It has been objected against the system of crystallization of rocks, that nature seems to perform nothing of that kind at the present period; admitting the fact, the objection would not possess much force, since a most satisfactory answer might be yielded, by asserting that the operation has ceased, in consequence of the task being accomplished, and, with respect to the granite and porphyry rocks, all the materials being employed. The formation of stone by crystallization, is, however, carrying on in various situations at the present moment; the incrustations formed in certain springs, and the various stalactitic formations which take place daily, are instances of this kind.

The unfitness of water to hold the substances forming the primitive rocks in solution, has been considered as a powerful objection; but it is to be considered, that the menstruum cannot be supposed to have been simple water; but, as Mr Kirwan observes, "this primitive fluid must have contained all the various simple saline substances, and indeed every simple substance variously distributed; forming, upon the whole, a more complex menstruum than any that has since existed, and, consequently, endued with properties very different from any with which we have been since acquainted."

There is still considerable difficulty, however, in adopting any system which confines the production of the various geological phenomena which present themselves to our observation, to too few and too limited causes; since, however necessary it may be to refer the general phenomena to the

operation of one particular powerful agent, it still must be necessary to take into account the sinking and the raising of particular spots from subterranean and submarine fires: as well as the changes produced by the subversion of lofty mountains, rapid and violent currents of water, and various other powerful causes.

Werner's System, 1791.] By the preceding sketch of the numerous systems which have been advanced, and by the cursory remarks on some of the objections which have been made against those which appear to possess the greatest share of probability, the reader will be better prepared to examine the system of the celebrated Werner, to whom, in the opinion of his learned and zealous annotator, we owe almost every thing that is truly valuable in this important branch of knowledge. For the purpose of conveying some idea of this ingenious system, the following sketch is taken from the view of it given in the Elements of Geognosy by professor Jamieson.

According to this system, the earth is supposed to have existed originally in a state of aqueous fluidity, which is inferred from its spheroidical form, and from the highest mountains being composed of rocks, possessing a structure exactly resembling that of those fossils, which have, as it were, been formed under the eye by water. From this circumstance it also follows, that the ocean must have formerly stood very high over these mountains; and as these appear to have been formed during the same period of time, it follows, that the ocean must have formerly covered the whole earth at the same time.

Contemplating the formation of the mountains themselves, Werner discovered the strongest proofs of the diminution of the original waters of the globe. He ascertained, 1*st*. That the *outgoings*—that is, the upper extremities as they appear at the surface of the earth—of the newer strata are generally lower than the outgoings of the older, from granite downwards to the alluvial deposit—and that not in particular spots, but around the whole globe. 2*d*. That the primitive part of the earth is entirely composed of chemical precipitations, and that the mechanical depositions only appear in those of a latter period, that is, in the transition class; and continue increasing through all the succeeding classes of rocks. This evidence of the vast diminution of the volume of water which stood so high over the whole earth, is assumed to be perfectly satisfactory, although we can form no correct idea of what has become of it.

By the earliest separations from the chaotic mass, which are discoverable in the crust of the globe, was formed a class of rocks, which are therefore termed *primitive rocks*. The circumstances which mark the high antiquity of these rocks are, that they form the fundamental rock of the other classes. Having been formed in the uninhabitable state of the globe, they contain no petrifactions, and, excepting the small portion which sometimes accompany those which will be next mentioned, they contain no mechanical deposites, but are, throughout, pure chemical productions. Small portions of carbonaceous matter, occur only in the newer members of the class.

Before the summits of the mountains appeared above the level of the ocean, and before the creation of vegetables and animals, a rising of the waters is supposed to have taken place, during which, that class of rocks which are said to be of the *second formation* was deposited. The rocks of this formation are clay, porphyry, pearl-stone porphyry, obsidian porphyry, seinite, and pitchstone; they exhibit very few mechanical depo-

sitions, are of complete chemical formation, and contain little or no carbonaceous matter, and never any petrifactions.

On the appearance of land, or during the transition of the earth from its chaotic to its habitable state, rocks which from this circumstance are denominated *transition rocks* were formed. In these rocks, the first slight traces of petrifaction, and of mechanical depositions, are to be found. As the former class of rocks were purely of chemical formation, so the contents of these are chiefly chemical productions, mingled with a small proportion of mechanical depositions; to explain the cause of the mixture, we are referred to the period of their formation, that at which the summits of the primitive mountains just appeared above the waters, when, by the attraction excited by the motion of the waves, and which we are reminded extended to no great depth, particles of the original mountains were worn off and deposited.

As the height of the level of the ocean diminished, so would the surface on which its waves acted increase, and of course the number of mechanical depositions. Hence, these are much more abundant in the rocks of the next formation, which are denominated *floetz rocks*, on account of their being generally disposed in horizontal, or flat strata. In these, petrifactions are very abundantly found, having been formed whilst vegetables and animals existed in great numbers. These rocks are generally of very wide extent, and commonly placed at the foot of primitive mountains; they are seldom of a very great height, from whence it may be inferred, that the water had considerably subsided at the time of their formation, and did not then cover the whole face of the earth. Countries composed of these rocks are not so rugged in their appearance, nor so marked by sudden inequalities, as those in which the primitive and transition rocks prevail.

Most of the rocks which have been just enumerated, are covered by a great formation, which is named the *newest floetz trap*. This formation also covers many of the highest primitive mountains; it has but little continuity, but is very widely distributed. It contains considerable quantities of mechanical deposites, such as clay, sand, and gravel. The remains both of vegetables and animals also occur very abundantly in these deposites. Heaps of trees, and parts of plants, and an abundance of shells and other marine productions, with the horns of stags, and great beds of bituminous fossils, point out the lateness of the period when this formation was deposited. In this formation several rocks occur which are also met with in other floetz formations; but the following are supposed to be peculiar to this class: basalt, wacke, greystone, porphyry, slate, and trap tuff. These rocks are said to have been formed during the settling of the water consequent upon a vast deluge, which is supposed to have taken place when the surface of the earth was covered with animals and vegetables, and when much dry land existed. From various appearances observed in these rocks, it is concluded, that the waters in which they were formed, had risen with great rapidity, and had afterwards settled into a state of considerable calmness.

The collections and deposites derived from the materials of pre-existing masses, worn down by the powerful agency of air and water, and afterwards deposited on the land, or on the sea-coasts, are termed *alluvial*, and are, of course, of much later formation than any of the preceding classes. These deposites may be divided into: 1*st*, Those which are formed in mountainous countries, and are found in valleys, being composed of rolled

masses, gravel, sand, and sometimes loam, fragments of ores, and different kinds of precious stones. 2*d*, Those which occur in low and flat countries, being peat, sand, loam, bog, iron ore, nagelflech, calc-tuff, and calc sinter: the three latter being better known by the names breccia, tufa, and stalactite.

In this ingenious system, in which so much knowledge of the subject prevails, and in which the marks of long and patient investigation are evident, a very close accordance with geological facts is generally observable. Some few difficulties however occur, particularly, it seems, with respect to the new trap formation; since, although the appearances which this is intended to explain do not better agree with any other supposition, still the rising of the waters, whilst they yet covered the summits of the primitive mountains, has much the appearance of a supposition made up for this particular purpose; and as, at the same time, it appears to be warranted by no other phenomena, it seems to require some further consideration before it is fully admitted.

Theory of Cuvier.] A succession of memoirs in the *Annales de Museum*, on the fossil remains of animals found in the strata around Paris, from the pen of M. Cuvier, enlarged afterwards into an ingenious and elaborate work, comprehending four volumes in quarto, but published by that distinguished naturalist under the unpretending title of *Recherches sur les Ossemens Fossiles des Quadrupedes*, has appeared in English, with Notes by Professor Jameson, as an Essay on the Theory of the Earth. It does not appear that M. Cuvier regarded his work in so important a light as his learned editor; but it may perhaps be expected that some notice should be taken of the speculations of one of the most accomplished geologists of the present day, even though of too limited a nature to be regarded as a theory of the earth. Every part of the surface of this globe, M. Cuvier maintains, exhibits such phenomena as unavoidably lead to the conclusion that the sea, at one period or another, has covered the whole, and remained for a long time in a state of tranquillity so as to form those regular and extensive horizontal deposites in which many of the marine exuviæ are contained. But there are also inclined or vertical strata of the same nature, situated under the horizontal strata, which having been necessarily formed in a horizontal position, have been subsequently lifted up and shifted into their inclined or vertical situation, and that too before the horizontal strata were deposited above them. Now amid these changes it was hardly possible that the same species of animals should continue to live. There must have been a succession of changes in animal natures corresponding to that in the chemical properties of the fluid which they inhabited. It is also conceivable that the change of element might be so great as to cause the entire destruction of all existing genera. Accordingly, not only the species, but even the genera change with the strata; and when the sea last receded from our Continent, its inhabitants were not very different from those which it continues to support. The strata around us, therefore, may serve the double purpose of recording the great revolutions which have taken place both in the animal kingdom and upon the surface of the globe. Neither physical nor astronomical causes of revolution on the earth's surface are sufficient to explain these changes. The irruption of the sea and its retreat have neither been slow nor gradual; the catastrophes have been sudden, and the present surface of the world is by no means of very ancient formation. This theory approximates more nearly to the Mosaical record than many

others which we have noticed. In fact, modern geologists are all eager to bear testimony to the actual occurrence of the deluge; neither are they, generally speaking, guilty of disowning the act of creation, though some of them have uttered incredible nonsense on this subject. M. Cuvier, indeed, by his catastrophes and epochs, agrees with many scientific men in assigning a far higher antiquity to our globe, than is consistent with the Mosaic account of the origin of things; but no Christian will hesitate which to prefer: and Granville Penn has abundantly demonstrated, what indeed there could be no good reason to doubt, that the objections to the Christian Revelation, founded on the facts of Geology, are as unphilosophical as they are impious.

Internal Heat of the Globe.] The existence of volcanoes and hot springs led philosophers long ago to suspect that there was an intense heat in the interior of the earth. The opinion of Werner, that the former arose from the combustion of masses of coal at moderate depths, was set aside by the discovery that the seat of the volcanic agents was under the primitive rocks, of course far below the coal-formation, and that the composition of lavas was the same in all parts of the world. The notion advanced by others, that hot springs might owe their origin to the accidental mixture of substances producing chemical action in the bowels of the earth, was equally inadequate to account for the permanency of these springs—their existence without any known change for ages. At length a third species of evidence presented itself in the temperature of deep mines, which it was observed was generally higher than the mean temperature of the year in the district. It was objected that the heat might arise from the breaths of the workmen, and the lights used by them. This explanation to be sure did not account for the difference of temperature said to be observed between shallow and deep mines; but the existence of the difference alluded to was doubted; and to this, as the point upon which the controversy hinged, several philosophers, especially M. Cordier, a professor of geology in Paris, directed their attention. The result is thus announced by the Parisian professor:—"1. Our experiments fully confirm the existence of a subterranean heat, which is peculiar to the terrestrial globe,—does not depend on the solar rays,—and increases rapidly with the depth. 2. The increase of the subterranean heat does not follow the same law over the whole earth; it may be twice or thrice as great in one country as in another. 3. These differences do not bear any constant proportion either to the latitude or longitude. 4. The increase is more rapid than has been supposed; it may go as high as *one* degree of Fahrenheit for 24 feet, but the mean, so far as the present observations have yet extended, cannot be fixed at less than one degree for 45 feet." In the deep borings made by M. Arago, it was found that the greater the depth from which the water ascended the warmer it was. Mr Bald of Alloa published some facts in the *Edinburgh Philosophical Journal* some years ago, and Mr Daubuisson gives others relating to the mines of Saxony, which establish the same conclusion. A writer in the *Annals of Philosophy* thinks that the increase in England is about one degree of Fahrenheit for every 10 or 12 fathoms of descent. Hence we have reason to conclude that it is not any peculiar local circumstances which generate the heat in warm springs, but that they merely derive their waters from reservoirs situated at a great depth. Pursuing this idea, the Bath waters, which have a temperature of 116, may be supposed to come from a depth of three-

fourths of a mile, and at the depth of two miles downwards we should find the temperature of boiling water; and that of melted lava at a depth which varies much in different countries, but may be estimated on an average at 60 miles.[18] Cordier, therefore, considers the whole globe as a mass of fused matter intensely hot, covered with a solid crust or shell whose thickness is about one 63d part of its semidiameter, and upon which crust man and all his works are suspended over the molten abyss.

Hence M. Cordier considers the quantity of matter thrown out by volcanoes, as affording a *measure of the contraction which the shell of the globe is undergoing.* He has examined and estimated the cubic contents of the matter ejected in one eruption by several volcanoes, and found that it did not amount to a cubic kilometre, that is, a cube, the side of which is rather more than half a mile. It follows that a contraction of volume, which would shorten the radius of the globe the 50,000th part of an inch, would be sufficient to force out the matter of one eruption. There are about 200 unextinguished volcanoes known, but many of them are silent for very long periods; but, assuming that there are on an average five eruptions in a year among them all, this would indicate that the radius of the globe shortened only one millimetre (1-25th part of an inch) in a century.

"This theory," says a journalist of great intelligence, "accounts for the frequency of volcanoes in the early stages of the globe's existence, when the crust was thin, the contraction rapid, and the fracture of its parts easy. As it increases in thickness, changes in its figure or volume become more difficult, and must be chiefly confined to the inner coats, among which it is probable that void spaces may be left; into these the fluid matter may be injected, which, in earlier times, would have reached the surface and formed eruptions. Assuming that the thickness of the crust is 60 miles, it would require a pressure equal to that of 28,000 atmospheres to make the fused lava reach the surface. Hence we see why such a vast number of volcanoes are found everywhere on the earth's surface, which were once active, but are now extinguished."

"In early times, when the earth was perfectly fluid at the surface, the attraction of the sun and moon would produce tides in the molten

[18] We shall give, in a tabular form, the results of some observations collected or made by M. Cordier, making use of British measures, and Fahrenheit's thermometrical scale.

Observations made on the Water of Springs in Mines.

MINES.	Depth of the Mine.	Temp. of the Spring.	Mean Temp. of the district.	MINES.	Depth of the Mine.	Temp. of the Spring.	Mean Temp. of the district.
	Yards.	Fahr.	Fahr.		Yards.	Fahr.	Fahr.
IN SAXONY.—*Daubuisson.*				Poullaouen, . . .	158	58.3	52.7
				Huelgoet. . . .	65	54.0	51.8
Junghohe Birke, . .	85	48.9	46.4	Ditto, ...	87	59.0	51.8
Ditto, ...	237	54.5	46.4	Ditto, ...	132	59.0	51.8
Beschertgluck, . .	279	56.8	46.4	Ditto.	251	67.4	51.8
Himmelfahrt. . .	244	57.9	46.4	CORNWALL.—*Fox.*			
BRITTANY.—*Daubuisson.*				Dolcoath, . . .	479	82.0	50.0
				MEXICO.—*Humboldt.*			
Poullaouen, . . .	42	53.4	52.7				
Ditto, ...	82	53.4	52.7	Guanaxuato. . .	570	97.2	60.8

The effects of the breaths and lights of the workmen is the same, whether the mine be shallow or deep; and, in the above table, the higher temperature of the springs in the deeper mines, and the increasing temperature of the springs in the deeper galleries of the same mine, as at Poallauen and Huelgoet, are very remarkable.

mass exactly as it does now in the ocean. These tides, which must have been four or five yards in height, would exert a disturbing force on the crust, while it was consolidating, by breaking and displacing its parts, and may have been one cause of the confused and fractured appearance of the primitive rocks. The same phenomena must exist even yet in the interior of the earth, but its influence must be extremely feeble.

"The rents and fractures produced still by contractions, especially in the interior, and perhaps still more the gaseous matter disengaged during refrigeration (as the phenomena of volcanoes prove), but kept pent up within the exterior shell exposed to an excessive temperature, explain the origin of earthquakes. These are most frequent in the regions of the globe where we would expect the crust to be thinnest, and the operation of the disturbing causes most violent. In all probability, it is the gaseous matter disengaged from the rocks during refrigeration, that impregnates those mineral springs, in which a portion of such matter exists. M. Cordier observes that these springs should have been more numerous in early ages, and various phenomena he thinks announce that this was the case.

"The gradual refrigeration of the earth explains other facts which have perplexed philosophers. It accounts, for instance, for so large a portion of fossil plants and animals found in cold countries, having the characters of those species which now belong to the tropics. Again, it has been observed, that the land surrounding the upper parts of the Baltic has risen from two to three feet within a century, while the French *scavans* have inferred from certain marks at the ruins of Tanis in Egypt, that the African continent is subsiding at the rate of a foot in a century. Considering all large portions of land as solid masses floating over a liquid abyss, and receiving unequal additions from below, we can easily understand why one part may rise and another descend.

"Lastly, As the metals are undoubtedly mixed with the fluid mass below, and the whole in consequence of its fluidity may have certain slow regular motions within itself, we have a key to the mysterious phenomena of magnetism—the variation of dip and polarity."

General Conclusion.] Thus we have endeavoured to present our readers with an outline of Physical Geography, in which are embodied the principal facts and reasonings on the phenomena of the material world. From the review which we have taken, we are not only entitled to draw an argument of design in the construction of our globe, and thus reason upwards to an All-wise and All-powerful Creator, in confutation of the atheist,—but we dare to challenge the infidel himself, after so many ages of anxious inquiry and ingenious investigation, to produce one solid objection to the claims and discoveries of divine revelation. It has been well observed, that among all the wonders geology presents to our view, the confidence of theorists is the most unaccountable. It is amazing to observe with what assurance men, pretending to bow to the philosophical canons of a Bacon and a Newton, will found a grave hypothesis on some newly-discovered bone or shell, and maintain, in opposition to every acknowledged principle of correct reasoning and philosophical induction, that they are thus elucidating the past history of the earth, and correcting the statements of revealed truth! In the same spirit with which the credibility of the Mosaic account of the work of creation has been called in question, have philosophers "reasoned high" of the time when, and the manner in which the final destruction of this globe shall be effected.

Vainly asking, with affected solicitude, May not those stars, those suns without number which guide the mariner in the midst of the pathless deep, be in a moment extinguished? May not this arch of the globe which supports us, give way beneath our feet? Is not the equilibrium of the seas liable to be subverted, and will not the foaming billows one day roll over these continents which are at present covered with the monuments of human industry? May not the earth approach too near to the sun, and be swallowed up by it like a drop in the ocean? May it not wander into those remote and dreary regions of space where the solar heat is too feeble to support the principle of life? "Vain wisdom all, and false philosophy!" Such questions are idle and impertinent, to say no worse. That the Omnipotent can annihilate all the countless suns and systems which move in illimitable space, is undoubtedly true; that He can suspend or reverse the laws of universal gravitation, and thus introduce disorder and destruction into every system conducted by such laws, is also true; but it is utterly improbable that He ever will. That our world will be destroyed we know from revelation, and that because it has been the abode of sinful beings; but there is no necessity for supposing such an awful catastrophe to involve in it the destruction or annihilation of a whole universe of worlds. That the billows of the ocean might again roll over the summits of the loftiest mountains, and drown the world as of old, is an event undoubtedly possible in respect of Divine power, though not in respect of the laws of nature, for the Noachic deluge was certainly effected by a miraculous interposition of Divine agency; but revelation tells us positively that "the waters shall no more become a flood to destroy all flesh," and that the final destruction of the present order of things shall be accomplished by the agency of fire, whenever Divine justice and wisdom shall see meet to command it. It ought always to be observed in reasonings on this subject, that creation is one thing, and the laws of nature another; that annihilation is one thing, and the suspension or removal of these laws is another. As God did not create by laws, but by power,—that is, as creation is an immediate effect of Omnipotent agency, previous to the existence of laws,—so, it is not by the suspension or reversal of the laws which regulate the phenomena of the universe, that its annihilation can be accomplished. As it required an act of Divine agency to effect the transition from nonentity to existence, so a Divine volition is equally necessary to the transition from existence to nihility.

GENERAL GEOGRAPHY.

PART III.—POLITICAL GEOGRAPHY.

Political Geography is that branch of the science which treats of the earth as inhabited by communities of men. It proceeds upon the facts that man is a social being,—that his social tendencies, however, are so limited and controlled as to produce, not one great universal community of the species, but a number of separate particular communities of individuals,—and that these communities are distinguished from one another, on the one hand by inhabiting different portions of the earth's surface, and on the other by the possession of certain peculiarities, varying in the various societies, but common to the various individuals of each society. Different situations on the face of the globe, and characteristic peculiarities of the masses of men who inhabit it, have thus been connected by so close an association, that the latter have generally been considered as coming within the legitimate sphere of the science which describes the surface of the earth. In strict accuracy of arrangement, perhaps, these discussions belong to other branches of literature than Geography properly so called; but the practical utility of including them in geographical works is so exceedingly obvious, and has been so universally acted upon, that no apology can be required for our devoting a considerable share of attention to them in the following work. The object, meanwhile, of these preliminary remarks is to explain, by definitions as brief and distinct as possible, the various technical terms which are in common use with regard to the subjects connected with this department of geography.

Language.] By far the most striking of those diversities which distinguish societies of men from each other is that of language. This difference of tongues by which the nations of the earth are discriminated, is recorded in the Sacred Writings to have originated in a miraculous interposition of the Divine Providence, at the period when the race of men began to scatter themselves more widely over the earth. What was the extent of the difference in the languages of men thus introduced,—whether it consisted in a total revolution which rendered the resulting languages completely unlike each other,—or in such a partial alteration as made the various classes of men address each other in dialects which, though mutually unintelligible, were still only modifications of the same mother-tongue,—it is impossible to ascertain, and even difficult to conjecture from the phenomena as they at present exist. On the one hand the striking coincidences which have been observed among languages, which, judging historically, we should deem the most remotely connected with each other, seem to point to the theory which views the original diversity of tongues as merely a difference of dialects; while the total failure of all attempts to trace these coincidences universally, and the consequent abandonment of the researches of philologists after the primitive universal language, appear to be facts at least equally strong upon the opposite side. It must be recollected, however, that besides this great and immediate revo-

lution on the languages of men, there has ever since been going on a more gradual, but not less efficacious process of change resulting from the influence of the different circumstances in which different communities are placed by events. Such circumstances are the various degrees of civilization,—the differences of climate, of religion, of government; in short, as the whole intercourse of life, and to a great degree the process of thought itself is carried on by means of speech,—every variety of national fortunes, and of national character. From such causes as these, in addition to the original confusion of tongues at Babel, the human race has been brought to that position in respect of language which it now occupies, and the planet of their residence has become what is styled by an ancient poet, "the many-tongued earth." There are several of the languages spoken by different families of men among which we can trace such resemblances as entitle us to suppose them of similar origin, and to class them into *families*. Of these families of languages, the most important are, 1*st*, *The Aramean*, so called from the ancient name of Syria, and bearing likewise the name of Shemitic, which includes the Arabic, Hebrew, Phenician, and Syriac dialects, spoken either now or formerly along the whole eastern and southern shores of the Mediterranean, as well as in Mesopotamia, Arabia and Abyssinia, on the Persian Gulf and the Red Sea. 2*d*. *The Indian*, including the Sanscrit the great mother-tongue of Hindostan, with all the more popular dialects of the Peninsula,—the Persic in its three different forms, the Zend, the Pehlevi, and the Parsi,—and many of the island-languages to be met with in the Eastern Archipelago and the South Sea. 3*d*. *The Hellenic*, inclusive of all the dialects of Greece and its colonies; from one of which mingled with the Celtic of the ancient inhabitants of Italy, sprung the Latin, as from the Latin by a similar union, are derived in the greatest degree the mixed languages of modern Europe—the Italian, the French, the English, the Spanish, &c. 4*th*, *The Germanic*, divided into the two great branches of the Teutonic, including the Frank, the Saxon and other dialects, and the Gothic, under which are arranged the Mæsian, the Swedish, and the Danish tongues. In regard to the rest of the innumerable languages which prevail in one part or another of the world—it were easy classing together a few adjoining dialects to multiply the number of families to any extent. But these languages are either so little known, as for example the tongues of Africa and America,—or so nearly extinct, as is the case with the few small remnants of the Celtic, still existing,—or so homogeneous in their forms, as in the example of the Chinese,—that it were vain parade to carry the classification further in a survey so general as this. Specialties like these belong rather to the particular description of different countries which is to follow. Meanwhile, it is of importance to observe that there are principles in the constitution of society which have more or less at different periods, and not least in our own days, tended to counteract the process of division among mankind in respect of language. Whenever any considerable portion of the world consisting of different tribes speaking different tongues has become civilized, or has by commerce, or in any other way been brought to feel the necessity of mutual intercourse, the inconveniences of the separation of tongues have been felt to be so great, as to lead to the adoption of some particular language, which, while each tribe retained its own peculiar speech in the intercourse of individuals, was adopted as the medium of international communication. Thus, during the period at which the provinces of the known earth were united under the Roman sway, Greek

was the civilized language of the world. Afterwards, when the nations were again separated by the disruption of the Roman empire, while a certain intercommunity of learning and religion, such as it was, still subsisted among the educated classes, Latin was the universal medium of this communication. In a similar way French for some time was the universal language of diplomacy, and English is now beginning to be that of commerce. It seems likely that as the human race advances in civilization, these counteractive principles will gradually acquire a greater degree of power, and that they will ultimately realize what has hitherto been thought but the dream of a few philosophers—*a universal language.* For becoming such a language, our own tongue seems to possess at least as good a chance as that of any other nation, whether we consider its internal resources and capabilities, or observe the firm and established footing which it has already obtained in all the great continents and regions of the world. The impulse which would be communicated by the adoption of a universal language to the general civilization of the species it would not be easy to estimate. But when we contemplate its efficacy on a small scale, and in the case of individual countries, we seem to be warranted in anticipating that it will prove one of the most powerful of those yet uncalculated energies which are to carry society most rapidly forward to the limit of its earthly advancement.

Religion.] Next to the difference of language, the most striking diversity by which nations are distinguished from each other is that of religion. This diversity takes its origin from the combination of an apparently instinctive principle in the human mind, which leads it to conceive of and to worship a superior power, and in virtue of which, man has by some philosophers been defined "a religious animal," with that endless variety of powers and passions in his nature, of circumstances and changes in his lot, which may affect, or be affected by this belief. Many theoretical accounts have been given of the process by which the simple and divine religion under which man was originally placed, was gradually changed, corrupted, and broken down into the multiform variety of systems which have at one time or other established themselves upon the earth. The details of these accounts, being altogether conjectural, cannot command our historical belief. But thus much is plain from them—that there are in the human constitution causes abundantly sufficient to account for the fact of the religious diversities among mankind which so strangely chequer the face of the earth. In classifying these diversities we find much less difficulty than in regard to the differences of speech; and it is a fact of some curiosity and importance, that the substantial differences of religion among men should be so few in comparison of those created by language. All the forms of religion which have obtained a public establishment among mankind, may be arranged under the two general heads of *Monotheism* and *Polytheism*—the former professed by the civilized nations of the present day, though the latter was established among those of antiquity. The principal monotheistic religions, that is, those which acknowledge one Supreme Being as the Creator, Preserver, and Governor of the universe—are three in number. 1*st, The Jewish Religion,* instituted for the express purpose of preserving among a peculiar people the great doctrine of the Unity of God, in opposition to the polytheism which had overspread the whole world besides, and to which the greater part of the Jewish nation scattered over the world still continues to adhere. 2*d, The Christian Religion,* which containing the completion of the Jewish

revelation, and giving the true religion a universal form, is now professed in almost the whole of Europe, and the European colonies. 3*d*, The *Mohammedan Religion*, constructed by Mohammed out of some fragments of the Jewish and Christian creeds, mixed with inventions of his own, which is now professed principally in the Turkish and Persian dominions. Each of these three great monotheistical systems, as they are actually professed in the world, is divided into a variety of sects which agree in holding the truth of the general system, but differ in regard to its details. Judaism was formerly divided into the three sects of the Pharisees, the Sadducees, and the Essenes; the first of whom acknowledged the divine authority of the whole Old Testament, as well as of a system of ancient traditions which had been gradually accumulated during the continuance of the Jewish polity,—the second admitted only the five books of Moses as divine, and totally rejected the tradition of the elders: they denied also the existence of a separate immaterial principle, the resurrection of the body, and a future state,—the third were principally distinguished by the corporeal austerities and abstinence which they practised beyond the strict requisitions of their law. In modern times the Jews are divided into two principal sects, the Karaites, and the Rabbinists; the former of whom acknowledge the Old Testament only as their standard of faith, while the latter, who are by far the more numerous, invest the Talmudical writings with nearly equal authority. The professors of the Christian faith may be classed under the three general heads of the Greek, the Roman, and the Protestant Churches.—The Greek Church, which, though corrupted by many superstitions, does not advance that claim of spiritual tyranny arrogated by the Roman, and the head of which is the Patriarch of Constantinople, is established in Russia, and includes almost all the remnants of Christian Churches which subsist in Asia and Africa. Its sects are numerous, among which the Orthodox are most powerful in Europe, the Nestorians in Asia, and the Monophysites in Africa. These sects are distinguished by the difference of their opinions in regard to the person of Christ. The first esteeming him God and man in two natures and one person; the second asserting him to have two persons as well as two natures; the third maintaining the unity of the natures not less than of the persons; or, in other words, a unity of nature and person.—The Roman Church has for its distinctive peculiarity the assertion of an exclusive right residing in herself to interpret the scriptures, and to govern the visible church. Its head is the Bishop of Rome with the title of Pope. Its subdivisions of parties are so numerous and turn upon points of such minuteness, that it is impossible to attempt the enumeration of them. The only one that is important, in a geographical point of view, is that, in consequence of which the Gallican Church, under the celebrated Bossuet, maintaining its subordination to the Pope, and its adherence to the general system of Catholicity, asserted as a practical privilege the right of administering its own internal government. Popery is the established religion of Italy, Austria, France, Spain, Portugal, and some of the Swiss Cantons, and of the remaining Spanish colonies, as well as of the new states in South America.—The Protestant Churches, which agree in disowning and resisting the tyrannical pretensions of the Roman Church, are distinguished among themselves by great varieties of sentiment in regard to doctrine and to church-government. The principal doctrinal divisions are the following:—Lutheranism, whose characteristic doctrine is that of consubstantiation,—Calvinism, which is dis

tinguished by the principle of predestination,—Arminianism, which maintains the self-determination of the human will,—Unitarianism, which denies the doctrines of the Trinity, the incarnation, and the atonement,—Baptists, who disown the practice of infant baptism,—Quakers, who deny the obligation of positive ordinances,—Swedenborgians, who believe in the continued existence of miraculous inspirations, &c. &c. The distinctions in regard to church-government are chiefly the following; 1*st.* Episcopalians, who maintain a subordination of ministers in the three ranks of bishops, presbyters, and deacons,—a form of government to which the Lutheran churches in a great measure adhere, but which is established in greatest splendour in the church of England, in regard to whose doctrine a controversy is carried on whether it is Calvinistic or Arminian. That those who composed her creed were Calvinists in doctrine, and intended that her Articles should be so, is very clear, both from history and their remaining works.—2*d.* Presbyterians, who assert the equality of rank among individual ministers, and the subordination of church-courts composed of these ministers collectively—a system of government established in the churches of Scotland, Holland, and Geneva, whose systems are Calvinistic.—3*d.* Independents, who assert the equality of all church-members in the matter of government, and deny any subordination either of individual ministers or of aggregate assemblies. This mode of administration prevails chiefly in the United States of America, and among the English dissenters of all doctrinal creeds.—4*th.* Methodists, who allow of no subordination of governors, and no right of government whatever in particular congregations or inferior courts, but place the whole power over all the body in the hands of a general meeting of delegates called the Conference. This mode of administration prevails among a large body of Christians in England and America, who profess an Arminian creed.—The third monotheistic religion is the Mahommedan—Mussulman, or Islam—the professors of which are divided into two principal sects, the Sunnites who predominate in Turkey, and the Shiites who have the ascendency in Persia. The principal distinction between these two sects is that the former maintain, and the latter deny the authority of the Sunna or book of traditions ; and that the former consider Omar and his successors the legitimate Caliphs, while the latter for the most part acknowledge as such Ali and his descendants. There is another remarkable sect of religionists who may be deemed a branch of Islam, the Druses, a tribe who inhabit the mountains of Lebanon, and who acknowledging as their prophet Mahomet Ben Ishmael, have framed a religion for themselves out of a strange medley of all the three great monotheistical systems which have successively predominated in the regions which they inhabit. Their system, however, bears the closest analogy to the last or Mahommedan, with which they live in the most immediate contact.

In addition to these three great systems of monotheism there have been enumerated by inquirers into this subject two or three sects of Deism,—by which is understood the religion which acknowledges one God, but offers to him no public worship, and rejects the idea of revelation altogether. In regard to these sects, however, our information is very scanty and obscure. Those which are generally so described are the two following:—1. The religion of Confucius—professed by the more cultivated classes in the Chinese empire. 2. The religion of the Sooffees in Persia and India.

Such are the leading varieties of religious systems built on the principle of the Divine Unity. The second great class of religious systems are those of Polytheism, or which acknowledge more deities than one. Of these

there are many varieties possessing different degrees of dignity. The most elevated of all, is the religion founded on the belief of the existence of two opposite ruling principles,—the power of good and that of evil. This system seems to have formerly prevailed among some of the northern nations, especially the Sclavonians and Scandinavians, as it does still among the North American savages; but the best known and most remarkable of its forms is that which it assumed in the ancient religion of the Magi established in Persia. To the good and the evil principles the Magi gave the names, respectively, of Oromasdes, whom they worshipped under the symbol of fire, and Arimanes, whose symbol was darkness. These powers they represented as engaged in a perpetual conflict which is finally to terminate in favour of the former. This belief was prevalent in Persia till the period of the Mohammedan conquest, and is still adhered to by a small remnant who are known among the Mussulmen by the name of Ghebers or Infidels.—The second form of polytheism is that of Buddhism, which under various forms prevails over the whole of Asia N. and E. of Hindoostan, as far as Japan. The principle of this system is, that all existence is in its origin but an emanation from the Supreme Being,—that all forms of existence are forms of Divinity—and that the tendency of all existence is to reabsorption into the Divine essence. This religion exists in its most subtilized form in the Birman Empire, in Siam and Ceylon—in China it is connected with hero-worship in the honours rendered to the dead legislator Fo—and in Tartary the adoration which it enjoins is directed to a priest bearing the name of the grand Lama, who, like the Egyptian Apis, is supposed never to die. The next in the descending scale of polytheistical religions is that which has been termed Sabeanism, from the name of an Arabian tribe among whom it long existed pure, and which consists in the worship of the heavenly bodies. This seems to have been the most ancient of all forms of idolatry, as all the systems of this nature which have existed bear evident traces of its admixture. Braminism is the third form of polytheism, and is peculiar to the Hindoos. It is a species of pantheism, the grossest form of idolatry, which supposing God to be the soul of the world, worship him under every form, animate and inanimate. Hence the countless number of deities among the Hindoos, calculated by Mr Ward at 400,000. By far the greatest, however, and most fascinating of all the polytheistical religions was that established among the ancient Greeks, and from them communicated to the Romans,—the principle of which was the deification of human nature,—the representation of all the powers of the universe which were supposed to be as numerous as its various forms and operations, by beings of human form, human passions, and human characters. This system, however, has been entirely extinguished by Christianity. The Polytheism of the ancient Greeks and modern Hindoos is nearly the same. The metamorphosis of Ovid compared with the Hindoo legends, affords the most convincing proof of the near resemblance of the two systems.—The most degraded of all the systems of religion which prevail among men is that which was formerly established most systematically in Egypt, and which still prevails among the heathen tribes of Africa, under the name of Fetishism. This religion consists in the adoration of a great variety of animated and inanimate objects in nature, as well as monsters of the imagination, as endowed with a divine or magical power. Among the old Egyptians this principle was expanded into a system of national worship directed to national Fetishes, such as the ox, the dog, and the leek. As it exists in modern times, it is chiefly personal:

each individual choosing his own Fetish by accident or caprice from the objects around him, and adoring it as the ruler of his own individual fortunes.

Such are the principal facts necessary to the understanding of the religious department of political geography, which discusses not certainly the least important or interesting of those diversities which discriminate the nations of men. In regard to this species of distinction, however, as well as to that of language, we can perceive already a gradual approach to uniformity, and we believe that it will be hereafter accelerated and completed. Which of the religions that now distract mankind is finally to obtain the ascendency, no Christian can doubt. Whether we look to the oracles of prophecy, or consider the former history of Christianity,—or contemplate the efforts to which she is now bestirring herself,—every thing combines to assure us that she is, ere long, to "make disciples of all nations," and to shed her civilizing, her moralizing, her saving influence over the habitable globe.

Government.] The third of the more important distinctions which prevail among the various communities of men, results from the variety of the forms of government established in different societies. The origin of government is to be found in the domestic economy, and the relations which nature itself has established between husband and wife,—father and child,—master and servant. When, in the course of events, a number of different but connected families first united themselves into a single community, and some established power became necessary for the regulation of their mutual concerns, the control to which they had recourse seems to have been modelled very closely on the paternal authority, and has hence been denominated *the patriarchal.* The patriarch, or chief of the clan, was generally the oldest representative in lineal descent of the original stock from which the tribe had sprung, and his office was rather to counsel and arbitrate, than to legislate and definitively to decree. As numbers multiplied, however, and the relations of the members of the community became more complicated, so conciliatory and feeble an authority as that of the patriarch was found incapable of maintaining order and tranquillity; and it was found necessary to invest the supreme authority with so much physical force and constitutional prerogative, as should entitle it to require and enable it to constrain the obedience of individuals. A state of society in which no such power exists is called in the language of politics a state of *anarchy.* To avoid the evils of anarchy, therefore, was the first object of government. It was soon, however, discovered that there were evils of a different kind, but equally grievous, which it was proper to guard against—the evils of slavery. Out of these two principles, then,—the fear of anarchy and the scorn of slavery,—the love of order, and the desire of freedom, variously acting and acted upon, a great variety of forms of government have arisen in various ages and regions of the world. These may be classified in the manner following:—There are two especial grounds of distinction among the various forms of established government—the form of the supreme power, and the form of the administrative system. By the form of the supreme power is meant the mode in which the collective force of the State is applied to constrain the obedience of the individual. Thus in some States, the supreme power is divided,—the laws are enacted and executed by different authorities; in others it is concentrated,—the same will both creates and applies the law. The division of the powers of government is the great safeguard which has been devised against the unjust encroachments of government upon the several liberties of the subject: inasmuch as the several wills which are thus

brought into play in every act of government, are mutual checks upon one another, and securities against the special prejudices, passions, or interests by which each might possibly be misled. Hence those governments which are built upon a division and balance of authorities, are termed *free* or *republican governments*. Those in which the supreme power is exercised undivided and by a single will, are denominated *arbitrary* or *despotical*. The second principle of distinction among governments, is the form of their administrative system, or the selection of the person or persons to whom the constitutional supremacy in the State is entrusted. Of this administrative system, there are generally enumerated three distinct forms: *Monarchy*, in which the supremacy is conceded to an individual; *Oligarchy*, in which it is shared among the individuals of a particular class; and *Democracy*, where it is exercised by the collective body of the nation. There are, therefore, created by the combined application of the two distinctive principles of government six different forms of policy which, though not realized according to the rigour of their abstract definitions in any government which has actually existed, are sufficiently descriptive for the purposes of classification. The first of these is *monarchical despotism*, which has all along been the established government over the whole of Asia, and among all the native states of Africa; which was also the constitution of the Roman empire, and of most of the powerful States in Europe which arose out of its ruins. In these last-mentioned States, however, this form of government was peculiarly modified by the prevalence of what is termed *the feudal system*, which established, as it were, a number of such despotisms, each within the other, by making the nobles, in relation to their vassals, exactly what the monarch was, in reference to the State at large. There was thus introduced into the European monarchies a principle of counteraction to the supreme despotism, which gradually produced certain constitutional limitations upon the prerogative, by establishing in them all a sort of common law, according to which the supreme will was expected to carry on the administration, and by at length legally settling in some of them—such as that of Great Britain, since the revolution of 1688, and that of France since the restoration of 1814—a system of constitutional checks and balancing powers lodged in hands distinct from those of the chief magistrate. In this way these two countries now afford specimens of the second species of government to which we alluded—monarchical republicanism, or as it is more generally termed, *limited* or *constitutional monarchy*. The third of the general forms of government may be called *oligarchical despotism*,—a form of policy which, from its intrinsic weakness, it has been impossible ever to realize upon a large scale. It prevailed, however, in many of the petty States of ancient Greece, of which the most celebrated is Lacedæmon, and in some of the similar commonwealths of Italy during the middle ages, the most powerful and distinguished of which was the Venetian. The fourth form of government, *oligarchical republicanism*, has seldom been exhibited in an actual example, except, perhaps, in the case of the Roman commonwealth after the emancipation of the plebeian order from political disability, and in one or two of the Swiss cantons. The fifth, or *simple democracy*, where the authority was exercised by the citizens and tribes, collectively and not representatively, as in the United States of North America, has for its most conspicuous examples the Athenian constitutions in ancient times, and that of Florence during the middle ages; and the last of the six abstract forms of government, *democratical republicanism*, yet remains to be displayed in its

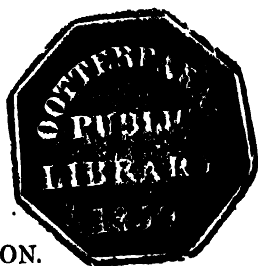
full energy by the future fates of the rising republics of North and South America. To these forms of natural government, it is proper to add another species of supernatural policy—that which was established of old over the Israelites as the chosen people of God, and which the Jewish historian has happily denominated *Theocracy*. In this peculiar government God himself acted as Sovereign, either immediately, or more commonly through the channel of divinely authorized and commissioned ministers. The Theocracy existed in its full force from the Exodus to the election of Saul as king; thenceforward in a modified form to the great captivity; and with less and less distinctness to the capture of Jerusalem by Titus. There are clear traces of a peculiar divine providence even now to be observed in the fortunes of the chosen race; and it seems probable from Scripture, that they will be again restored to the beloved land, and to national independence and splendour, at that auspicious era which prophecy as well as a just observation of the past lead us to expect, when both the ends of government, order, and freedom, shall be universally realized, and every principle of anarchy, and every system of tyranny, shall have perished from the earth.

Civilization, Statistics, &c.] In addition to these three great objects of political geography, the distinctions of language, religion, and of government, there are a great variety of subordinate circumstances to be taken into account, which it would be a waste of time to enumerate one by one, but which may generally be classed under the heads of *Civilization* and *Statistics*. To the former class of circumstances belong the distinctions connected with food, clothing, lodging, social manners and laws, literature, science, and national character. To the latter pertain the varieties depending on the state of the population, the division of ranks, the nature and extent of public resources, the distribution and application of national industry, the arrangements of police for the maintenance of internal order, and the constitution of the armed force for defence against foreign aggression. The distinctions, among nations connected with such circumstances as these, though on a great scale less important than the primary varieties of speech, religion, and government, are nevertheless so closely connected with these, and possess in themselves so familiar and homefelt an interest, that they cannot be overlooked by the political geographer without leaving the portraiture of the different nations comparatively destitute of expression and of character. In addition to the very full details upon these important subjects, we have much pleasure in being able to present the reader with a valuable compendium of Universal Statistics by Balbi, as a sequel to this necessarily brief outline. The introduction of this large Table into our volume has been attended with great expense; but its usefulness to the geographical student was too obvious to be overlooked in a work like the present.

History.] These then are the principal objects of Political Geography; that is, the principal circumstances by which varieties of human society are connected with varieties of local situation. But these circumstances in the case of each individual nation, are exposed to perpetual change and fluctuation in the lapse of time, from the action and reaction which the different powers within and without the State are continually maintaining. Hence it happens, that the relation which the different societies of men occupy in these respects to one another, and which it is the object of Political Geography to describe, is also perpetually varying. It therefore becomes necessary for the right understanding of this

relation to call in the aid of History; the subjects of which are precisely the same as those of Political Geography, but which treats specifically of the changes and modifications produced in regard to them by the progress of time and the course of events. In consequence, therefore, of these principles, and in conformity with the example of former geographers, we shall prefix to the geography of each particular country a sketch of its public history; and in this way we hope in our present work to set before our readers something approaching to a complete and an accurate delineation of the human race as a great social community, in both the one and the other of those great mysterious relations by which all created existence is limited and modified—the relations of space and of time.

EUROPE.



GENERAL INTRODUCTION.

AMONG all the divisions of the globe, Europe is that in which perhaps the works of external nature are on the smallest scale, and in which certainly the development of mind is on the greatest. "A mere adjunct of the immense Asiatic continent"—to use the words of the most illustrious geographer of modern times—"the whole peninsula could hardly contain a basin[1] large enough for the Nile, the Kiang, or the Amazons. Its loftiest mountains cannot be compared in height, or in extent to the Andes, or Himalayas. If all its downs and uncultivated lands were added to the sandy plains of Africa, the augmentation might be wholly imperceptible. The productions of the animal, vegetable, and mineral kingdoms are here few and insignificant. Its mines do not abound in gold; the diamond is not found among its minerals. There are not more than fifteen or twenty species of quadrupeds that belong exclusively to Europe, and these are not of the most useful kind. Some animals, as the horse, the ox, the sheep, and the dog, have been greatly improved by the care and industry of man; but the most valuable natural productions have been imported from other quarters of the world. The silk-worm was brought from India, fine wool from Mauritania, the peach from Persia, the orange from China, and the potatoe from America. If we are rich, our wealth has been derived from the produce or spoils of other countries." Presenting a less extent of surface than Asia, Africa, America, our continent shows that surface more crowded with men, improved by cultivation, enriched by productive industry, and extensive commerce, embellished with mighty cities, and splendid works of art, illumined with the reflections of genius, and invested with irresistible preponderance in the scale of political importance. In other regions, we contemplate, amid the great physical features of the scene,

> A world of wonders, where creation seems
> No more the works of Nature, but her dreams.

In Europe, we behold a yet more elevating spectacle,—spirit asserting its supremacy over body,—and man, the lord of nature, pursuing most gloriously the high destiny originally assigned him 'to replenish the earth, and to subdue it.' In other regions, it is matter we wonder at; in Europe, it is mind we admire. Here humanity has her chosen seat, and from hence have emanated her noblest gifts.

Name.] When, and from whom Europe received its present appellation is not recorded in authentic history. What is said in the mythology of ancient Greece respecting the origin of the name, belongs not to our province to relate.

History.] The most probable hypothesis is, that the first inhabitants of Europe came from Asia, the cradle of the human race; and that

[1] By the *basin* of a river, is meant all the countries over which its branches extend.

Greece was the region earliest peopled in Europe. The nation of the Hellenes existed here fourteen centuries before the Christian era, and soon surpassed the Asiatic stock in intellectual culture. The highest point in the civilization of this nation—better known under the appellation of *Greeks*—may be fixed about three centuries before the birth of Christ. Great in men and deeds, enriched by arts and sciences, adorned with all the most glorious productions of a variously cultivated intellect, this epoch in the history of Greece will ever remain the admiration of mankind. But this ennobled people were destined to experience the instability of all human things. With the dissolution of the universal monarchy which Alexander the Great had erected upon the ruins of Grecian freedom, the Grecian name lost its pre-eminence in the history and fortunes of Europe.

At the same moment in which the star of Grecian ascendancy sunk beneath the political horizon of Europe, there arose, in a neighbouring country, another State which was destined to win the empire of the world. On the banks of a small Italian stream, a petty colony from Asia had early located themselves. These strangers gradually associated with the surrounding tribes, and at last united with them in a regularly constituted community. Thus was founded infant Rome. Having made themselves masters of the whole of Italy, and successfully terminated the struggle with Carthage for the dominion of the countries bordering on the Mediterranean, the Romans began to spread their name and influence throughout the whole of Europe; Athens came under their lordly protection, and Athenian arts and sciences were thus transplanted to Italian soil. By successive conquests, the southern countries of Europe, Portugal, Spain, and France, were added to the Roman empire; and even a part of Britain, Belgium, Helvetia, the Hungarian provinces of Pannonia, Illyria, and Dacia, and that portion of Germany which is situated between the Danube and the Alps, received laws, language, and the arts of social life from these conquerors.

For many ages, all beyond the boundaries of the Roman empire was savage and barbarian life. But military despotism, imperial luxury, and, above all, the erection of an Eastern and Western empire out of this gigantic State, hastened the decline of the Roman power. The nations of the rough North threw themselves upon the beautiful and cultivated provinces of the Western empire; and some centuries afterwards, Constantinople, the last seat of the Cæsars in the East, yielded to the protracted assault of Asiatic hordes led on by the spirit of conquest and religious enthusiasm.

In the 9th century of the Christian era, Europe had declined into a state of barbarism little less rude than that which characterized its Western nations before the Roman conquest. The doctrines of the Christian religion were, indeed, eminently calculated to foster the arts of civilized life; but the selfish artifices of an ignorant priesthood everywhere checked their benign influence. The empire of the Franks, originally settled in Gaul had, however, risen to such a pitch of greatness under Charlemagne, that the new States of France, Germany, Italy, Burgundy, Lorrain, and Navarre, were now created out of it. About the same period, the Slavonians founded kingdoms in Bohemia, Poland, Russia, and the north of Germany; and, in the extreme North, the gallant Normans became conspicuous in European history.

The Popes of Rome at last succeeded in establishing pretensions for

which the minds of men had been well-prepared by the most abject superstition. Under Gregory VII. the papal hierarchy first presented a new form of absolute monarchy in Europe. Its dominion was in the minds of the people; and the tools with which it operated upon society were the strongest feelings of human nature. Hence the ease with which a few priests excited the warlike powers of Europe to the mad expeditions against the infidel possessors of the Holy Land. The Crusades swept away millions of men; but were the means of introducing the arts and sciences of the more polished East into Europe, and ultimately gave rise to a middle and most beneficial class of society, which formed the connecting link between the nobles, or lords of the soil, and their peasantry, or bondsmen.

The darkness of the Middle ages now began to clear up. Italy, the centre of the hierarchical power and opulence, and a country favourably situated for the commerce of the Mediterranean Sea, was at once enriched by the influx of all the wealth of Europe, and invited again to take the lead in the arts of civilized life. Commerce, with the same mighty influence which she had anciently exerted, soon subdued the spirit of barbarism upon all the coasts of Europe, and the dawn of modern civilization and refinement arose in her horizon. The invention of the art of printing was soon and necessarily followed by the Reformation; and from these grand and primary causes have resulted a thousand principles, by the combined operation of which Europe has become to the rest of the world, what the heart is to the human body, or the sun to the planetary system.

Limits.] Europe is bounded on the north by the Northern Icy Sea, whose unexplored waters may be considered as stretching to the North Pole. The Western or Atlantic Ocean, with its numerous large gulfs, laves its whole western shores. And here it has been usual for geographers to draw the boundary line of this continent between Greenland and Iceland, so as to include the latter island as an appendage of Europe, but to leave Spitzbergen to America. This arrangement we mean to follow. For although Iceland is, in a strictly geographical sense, a dependance of Greenland, and ought therefore to be regarded as belonging to America, yet it has from the most ancient times been historically and politically viewed as belonging to Europe. For the same reason we shall include Nova Zembla in the European division of our work; as that island, though lying for the greater part within Asiatic parallels, has been included by its Russian rulers, in the European government of Archangel. From the Atlantic, the Strait of Gibraltar leads into the Mediterranean, whose waters lave the whole extent of the blooming southern shores of Europe, and the northern coasts of the African continent; but it is not ascertained whether Malta, Gozzo, Comino, Lampedusa, and Limosa, lying between Sicily and Tunis, are African or European islands. On the east, the boundary line betwixt Europe and Asia takes a circular sweep to the south of Candia, and runs northwards through the Ægean Sea or Archipelago, to the Strait of the Dardanelles, giving the islands of Rhodes, Cos, Nicaria, Samos, Scio, Mitylene, and Tenedos to Asia; and leaving those of Scarpanto, Stampalia, Naxos, Scyros, and Lemnos to Europe. It then passes onwards through the Strait of the Dardanelles, the Sea of Marmora, and the Thracian Bosphorus, into the Black Sea, through which it runs in a N. E. direction, and entering the Strait of Enikale or Cimmerian Bosphorus, passes into the Sea of Azof. Thus far the limits of Europe are quite natural and subjected to no dispute; but

from the northern extremity of the Sea of Azof to the Icy Sea, the boundaries between Europe and Asia are not so easily determined. The ancients appear to have drawn a line at random from the Sea of Azof to the Caspian Sea; and occasionally to have viewed the winding course of the Don as pointing out the natural limits of either continent. Malte Brun considers the courses of the Manytch and the Kuma as indicating the lowest level of the isthmus, between the Caspian Sea and the Sea of Azof, and consequently the most natural boundaries between Europe and Asia in this quarter. Hassel, considering those parts of Kasan, Astrachan, and Siberia, which did not belong to Russia before the time of Ivan Basilowitsch, as still decidedly Asiatic in every distinctive feature, proposes to exclude them from the geography of European Russia. According to that eminent geographer, the European boundary line ought to commence beyond the Sea of Azof, at the peninsula of Gmutarakan. Passing to the south of the territory of the Cossacks of Tschernomorski and the Don, Hassel's line runs along the western boundaries of the Asiatic Russian governments of Saratow, Pensa, Simbirsk, Wiatka, and Perm, to the sources of the Petschora, where it joins the Uralian Mountains; from the northern extremity of which barrier, an imaginary line drawn to the mouth of the Kara, and thence across to Nova Zembla, completes the western limits.[2]

Dimensions.] The great irregularity of its form has rendered it difficult either to determine the medial length and breadth of this continent, or to calculate its superficial extent. The greatest extent of Europe is measured by a line running from N. E. to S. W. between the mouth of the Kara and Cape St. Vincent. This is generally considered as the length of Europe, and measures about 3,490 British miles. The greatest breadth of the continent is measured by a line running from N. to S. between Cape North and Cape Matapan, two places almost under the same meridian, and distant from each other about 2,420 miles. Were we to include the islands belonging to Europe in these measurements, the breadth of Europe would fall to be measured from Cape Jedjanoj in Nova Zembla, to Cape Motala in the Island of Candia.

Superficial Extent.] The superficial extent of Europe has been variously estimated by different geographers. Our want of information respecting the extent of some countries, and the doubts regarding the real boundaries between Europe and Asia, noticed above, increase the difficulty of stating precisely the extent of surface belonging to Europe. Kitchen reckons 3,258,038 English square miles; Hassel, 3,331,579; and Crome, 3,796,349. Perhaps, notwithstanding its irregularity of form, we may

[2] Two other eminent geographers, Hase and Pallas, have endeavoured to fix the limits of Europe on the west. Hase's line follows the course of the Don to the junction of the Modera Ditza, and pursues the latter river to its source, whence passing over to the neighbouring source of the Dura, it is conducted to the Wolga. It then proceeds along the western boundaries of Kasan and Siberia to the Ural chain, which it follows to the Icy Sea. Pallas considers the Uralian Mountains, as forming—to the source of the Bielaja—the natural boundaries between the two continents. To bring this chain into connexion with the Sea of Azof, he makes use of a ridge of mountains running from that Sea, through the steppes of Kuban, down to the Sarpo. It then follows the course of that river to the Wolga; and continues along the western bank of the Wolga to the junction of the Ulostan, where it crosses and runs northwards to the Pseudo-Ural, a large floetz mountain which runs between Ourenberg and Samara, and joins the real Ural near the source of the Bielaja. Both these boundary lines are extremely arbitrary, and are attended with the inconvenience of cutting several governments of the Russian empire, so as to give one part of the same government to Europe, and another to Asia.

ascertain the superficial area of this continent with tolerable accuracy, by reducing it to an oblong square. If for angles of this square be taken, the North Cape in Norway, and the town of Ekaterineburg in the Russian government of Perm, Bordeaux in France, and Cape Solomon the eastern extremity of the Island of Crete, the sides of this parallelogram will measure 2,100 miles, and 1,500 miles respectively, and will enclose a superficies of 3,150,000 square miles; and the different portions of land excluded from this measurement, will amount to about 300,000 square miles, making in all a superficial extent of 3,450,000 square miles. Europe thus embraces about one-sixteenth part of the whole terrestrial surface of the globe; and, with all its islands, does not exceed in superficial extent, the Australian continent.[3]

Waters.] Europe is particularly distinguished by the seas and numerous gulfs that wash its shores, and the number and extent of its inland waters. Hence the facility with which the commercial intercourse of nations is here conducted; and hence too the influence which Britain has been enabled to exert over the political destinies of Europe, as a great maritime power.

The White Sea.] The Northern Icy Sea is the name given to that portion of the waters of the great Atlantic Ocean which lies within the Arctic circle. These waters are probably destined to remain for ever unexplored. The White Sea, or *Bieloi-More*, is a great basin of this sea, into which thirteen large rivers empty themselves. It has three secondary gulfs: viz. the Droinskaja, Onegskaja, and Kandalaskaja; and freezes every year. Its shores are low and rocky; and its surface is frequently agitated by violent tempests, which set in from the N. E. This sea has no natural or artificial connexion with Lake Onega, as Buffon asserts; for the Onega River, which runs into the White Sea, does not flow from the lake of the same name, but proceeds from Lake Latscha, near Kargopol.

The German Sea.] Doubling Cape Stat, the western point of Norway, we enter that part of the great Western Ocean called by navigators the German Ocean, and now, more generally, the North Sea. This sea extends from the Shetland Isles to the Strait of Dover, along the eastern shores of Great Britain, and washes the western coasts of the Netherlands, Germany, Denmark, and Norway. The German sea has made many remarkable encroachments upon its coasts, and an immense deposite of debris is thus spread over a great proportion of its bottom, while in some places, as at the mouth of the Elbe, it has admitted of the enlargement of the land by alluvial deposites. The greatest depth of the water in this basin seems to be upon the Norwegian side where the soundings give 190 fathoms; but the mean depth of the whole may be stated at only about 31 fathoms. There are a vast number of shoals and sandbanks in this sea, the surface of which has been estimated by Mr. Stevenson to contain about 153,709 square miles, while the aggregate

[3] The great continent, composed of Europe, Asia, and Africa, constitutes about a seventh of the whole surface of the earth; America, about a sixteenth; and Australasia, or New Holland, about a fiftieth: or—in hundredth parts of the whole, Europe contains 2, Asia 7, Africa 6, America 6, and Australasia 2; the remaining 77 being sea: although some authors assign 72 parts only out of one hundred to the sea, and 28 to the land. These proportions may be ascertained with tolerable accuracy, by weighing the paper made for covering a globe, first entire, and then cut out according to the terminations of the different countries; or, if still greater precision were required, the greater part of the continents might be divided into known portions of the whole spherical surface, and only the remaining irregular portions weighed.

superficial contents of the sand-banks alone amount to no less than 27,443 square miles, or about one-third of the whole *terra firma* of Great Britain.[4] One of these great banks, known to mariners as the *Long Forties*, trends N. E. in the direction of the ebb-tide, from the entrance of the Frith of Forth, no less than 110 miles, while the Denmark and Jutland banks extend upwards of 105 miles in a N. W. direction. The Dogger Bank extends upwards of 354 miles from N. to S.[5]

The Jutland Channel and Cattegat.] The English and the Dutch have given the name of the *Sleeve* to that narrow part of the German Sea which divides Norway from Jutland, sometimes called the *Skager Rack*. Malte Brun suggests the Norway or Jutland Channel as a more appropriate designation. This channel, turning southward near Cape Skager, forms another and a narrower channel, crowded with islands and rocks, called the Cattegat; and from the latter channel three straits, viz. the Sound, and the Great and Little Belts,[6] conduct into the Baltic.

The Baltic.] The Baltic has been named the *Eastern Sea* by the Scandinavians and Germans. This great northern Mediterranean Sea washes the inner shores of Germany, Prussia, Russia, and Sweden, and has a superficial extent of 151,900 square miles, including the Gulfs of Bothnia and Finland. The Gulf of Bothnia being almost divided from the main waters of this sea by a line of islands extending from Finland to Sweden, has been compared to an independent lake; and the Gulf of Finland, into which no less than forty rivers discharge themselves, and whose waters are consequently fresher than any other portion of the Baltic, and are affected by the periodical swellings of its tributary streams, has been, with still greater propriety, compared to the embochure of a large river. The land-locked basin of the Baltic is frequently agitated by dreadful storms; and the dangers of the navigator are here increased by the shoally coasts of Prussia, and the numerous strands and cliffs of the Swedish shore. During the melting of the snow, in summer, a strong current runs into the North Sea from the Baltic, by the Sound and the two Belts. At other seasons, the currents are regulated by the prevailing winds. The W. and S. W. sometimes introduce the waters of the Atlantic. The general depth of the Baltic is 60 fathoms. This inland sea is usually frozen four months annually; but the rigour of the climate appears to have considerably diminished, as the duration and extent of the ice was much more considerable here in the 14th and 15th centuries than now. The tides of the Baltic are scarcely perceptible, and its waters are comparatively fresh.

The English Channel.] The Strait of Dover, or the *Pas de Calais*, connects the North Sea, on the south, with the English Channel, or *Manche*, an arm of the Atlantic extending between England and France, and subject to high and impetuous tides.

The Mediterranean.] The Mediterranean stands connected with the Atlantic Ocean by the Strait of Gibraltar. This Strait, the most important in Europe, is about twenty-eight miles in length, and measures about eight miles across at its narrowest point. In the middle of the Strait, a strong current sets in from the Atlantic, while two feebler lateral currents,

[4] See an interesting article, from the pen of this able engineer, 'On the Bed of the German Ocean,' in the 5th No. of the *Edinburgh Philosophical Journal*.

[5] Mr. Stevenson estimates the average height of the sand-banks situate in the middle of this ocean at 78 feet, and their aggregate contents at 2,241,248,563,110 cubic yards, or about 14 feet of the depth of the whole German Ocean.

[6] The word *Belt* means an invasion or irruption of the sea.

flowing in the opposite direction, convey the waters of the Mediterranean into the Atlantic.[7] The superficial extent of the Mediterranean, without reckoning its two arms, the Adriatic Sea and Archipelago, is nearly 860,000 square miles. The breadth of this sea is various. Between Andalusia in Spain, and the opposite coast of Africa, the distance is about 150 miles, while from the head of the Gulf of Sidra to the mouth of the Adriatic, the distance is nearly 700 miles. Its surface is sprinkled with a vast number of beautiful islands, some of which are very extensive, and were formerly the abodes of civilization and refinement.

The Black Sea.] The Black Sea enters from the Mediterranean by the Strait of the Dardanelles, the Propontis or Sea of Marmora, and the Bosphorus or narrow channel of Constantinople. The shores of this ocean are low. Its waters are not so pure as those of the Mediterranean; they are likewise fresher, a quality they probably owe to the many large rivers which discharge themselves into this inland sea. The Black Sea, including the Sea of Azof, covers a surface of 233,000 square miles, and is connected by the Strait of Caffa, or Cimmerian Bosphorus, with the turbid waters of the Palus Maeotis, or Sea of Azof. Some geographers are of opinion that the latter sea communicates with the Caspian by means of subterranean channels. Malte Brun considers it not improbable that a former Strait connected these two seas, and that it has been gradually obstructed, in the course of ages, by gravel and alluvial deposites from the torrents of Caucasus; but this is an opinion we cannot adopt.

Lakes.] Europe has an abundance of inland lakes. The greater part of them are situated in Switzerland, Upper Italy, Germany, Russia, and Sweden; but very few of them can be compared, in point of extent, to those found in other parts of the world. The largest European lake is the Ladoga, in Russia, which has a superficial extent of 6,310 square miles; the Onega, in the same country, is about half that size, and greatly exceeds the largest of the remaining lakes. The accumulation of lakes, or insulated pools of water, in some places of Europe, is very remarkable. Some Russian governments possess an incredible number. They are less numerous in the western parts of Europe. But in Iceland, a hundredth part of the territory is occupied by lakes.

Rivers.] Europe is abundantly watered, though its rivers are greatly inferior in size to those of the other continents. In fact, our continent is too much intersected by the sea, and presents too small a mass of land, to abound in such magnificent streams as are found elsewhere. In the eastern part only, where it stands connected with the great Asiatic mass of land, is found any considerable breadth of contiguous territory, and here also

7 It has been generally believed that these side-streams are unable to return a body of water equal in bulk to that received from the Atlantic, which, added to the enormous quantity of water which the Mediterranean receives from the numerous streams which flow into it, would be sufficient to elevate the waters of that sea 30 feet annually; and some naturalists have attempted to explain the apparent difficulty, by supposing that the Mediterranean gets rid of its superfluous waters by an excessive evaporation, promoted by a large internal fire situated somewhere under the bed of this sea, the presence of which seems to be indicated by the numerous volcanic explosions which have occurred in the Mediterranean. But Malte Brun denies the alleged fact, that the stream from the Atlantic conveys a larger body of water into the Mediterranean than it disgorges by the opposite currents; and attributes the apparent influx of the ocean to the pressure of a greater fluid mass on a smaller body of water; a pressure which, from the force of its impulsion, must necessarily displace the upper strata in the lesser mass. If an anchor be cast in the Strait, a lower current may be discovered, which carries to the ocean the superfluous waters of the interior sea.

do we find its largest rivers. Malte Brun calculates that if all the rivers in Europe be taken as 1.000 :

Those which flow into the Black Sea, are	0.273
Into the Mediterranean, including the Archipelago and the Adriatic,	0.144
Into the Atlantic Ocean, ...	0.131
Into the North Sea, ...	0.110
Into the Baltic, ...	0.129
Into the Northern Ocean, ...	0.048
Into the Caspian, ...	0.163
The same author estimates the water discharged from the Wolga, at	0.144
From the Danube, ...	0.124
From the Dnieper, ...	0.061
From the Don, ...	0.052
From the Rhine, ...	0.030
From the Dwina, ...	0.021

Plains.] The greater part of Europe is a mountainous surface; but the masses which tower up in the south greatly exceed those of the north. The plains of Europe are much inferior in dimensions to the same physical feature in the other continents. With the exception of the wide valley of the Theiss, and the basin of the Po, we do not recognise any extensive plain on the south of the Sudetic chain; but an enormous plain extends from the mouth of the Rhine, over the whole of northern Germany and the greater part of Poland, to the foot of the Uralian chain. The difference in general elevation between northern and southern Europe may be illustrated by stating, that if the waters of the Atlantic Ocean were to rise 1,500 or 1,600 feet above their present level, the whole of northern Europe, with the exception of the mountainous districts of Norway and Scotland, would be laid under water; while southern Europe, on the contrary, being higher than the level of such an inundation, would form one or two large and high islands.[8]

Mountains.] The most elevated districts in Europe are Switzerland and Savoy. In the comparatively level countries of Europe, extending from Iceland to the Caspian sea, the mountains rise in insulated groups; while in the southern and central parts of this continent, or from Etna in Sicily, to the Blocksberg of the Harz, and from the Strait of Gibraltar, to the Bosphorus, all the mountains belong to one great connected system.

8 We may form a tolerably accurate idea of the levels of the ancient continent, by tracing a line across it in such a direction as to pass no river; which will obviously indicate a tract of country higher than most of the neighbouring parts. Beginning at Cape Finisterre, we may soon arrive at the Pyrenees, keeping to the south of the Garonne and the Loire. After taking a long turn northwards to avoid the Rhine, we come to Switzerland; and we may approach very near to the Mediterranean, in the state of Genoa, taking care not to cross the branches of the Po. We make a circuit in Switzerland, and pass between the sources of the Danube, and of the branches of the Rhine, in Swabia. Crossing Franconia, we leave Bohemia to the north, in order to avoid the Elbe; and coming near to the borders of Austria, follow those of Hungary to the south of the Vistula. The Dnieper then obliges us to go northwards through Lithuania, leaving the Don wholly to the right; and the Wolga, to pass still farther north, between Petersburg and Moscow, a little above Bjelosero. We may then go eastward to the boundary of Asia, and thence northward to Nova Zembla. Hence we descend to the west of the Oby, and then to the east of the branches of the Wolga, and the other inland rivers flowing into the Lake Aral and the Caspian Sea. Here we are situated on the widely extended elevation of India, in the neighbourhood of the sources of the Indus; and, lastly, in our way from hence towards Kamschatka, we leave the Jenesei and Lena on the left, and the Ganges, the Kian Kew, the Hoangho, and the Amur on the right.

The Alps.] In this quarter are the Alps,—the highest, and beyond comparison the most extensive range of mountains in Europe, though scarcely exceeding one-half of the average height of the great South American chain under the Equator. Perpetual ice commences here at the elevation of 7,000 or 8,000 feet. At the height of 10,800 feet the ice disappears, and the atmospheric vapour, congealed as it descends, covers the ground with eternal snow. The Alps extend over a space of 13,000 square miles. They branch out, in various angular directions, into the Maritime, Cottian, Graian, Peninne, Lepontine, Swiss, Rhetian, Norian, Carnian, Julian, and Dinarian Alps, which again spread out in many secondary chains.

The Appenines.] The Appenines, stretching in a vast crescent through the whole length of the Italian peninsula, and evidently connected with the mountains of Sicily, may be regarded as a southern branch of the Alpine series. The average height of this chain is about 5,000 feet.

The Pyrenees.] A second great chain stretches its branches over the whole peninsula of the Pyrenees. The two outer bulwarks of this peninsula—which consists of a central plain elevated from 2,000 to 4,000 feet—are the mountains commonly called the Pyrenees, stretching between France and Spain on the north, and the Alpujarras or *Sierra Nevada* of Spain on the south. The mountains of Auvergne, which are connected with those of Vivarais and the Cevennes, are united to the Pyrenees by the Logere.

The Hellenic Mountains.] At the other extremity of Europe, three chains of mountains meet together, collectively called Argentaro, at a point nearly equidistant from the Danube, the Adriatic, and the Ægean Sea. This central point may be considered as the nucleus of all the mountains in European Turkey. From it proceeds the ancient Hæmus or modern Bolkan, eastwards to the Black Sea. A second range runs N. W. till it joins the Carnian Alps; and a third runs southwards through the peninsula, dividing the northern continent of Greece into two parts of nearly equal breadth, and passing into the islands of the Archipelago. As the Hellenic Mountains, with the exception perhaps of Athos and Olympus, have never been accurately measured, it is impossible to determine whether or not they are higher than the Appenines. Mount Orbelus, the northern boundary of the country, has, according to Fouqueville, its summit perpetually covered with snow, and must therefore, according to the laws that fix the lower limit of congelation, exceed 8,500 feet of elevation. None of the other Hellenic Mountains, however, whether they be insulated or disposed in groups and ranges, attain the line of perpetual snow.

The Carpathian Mountains.] The Carpathian and Hercynian Mountains are separated from the Alps and the Hellenic Mountains by the Danube. This wild range, the general elevation of which is from 4,000 to 5,000 feet, completely encircles Transylvania, and is connected with the Sudetes or Giant Mountains of Silesia, and the *Erzgebürge* or Metallic Mountains of Saxony.

Russian Mountains.] The mountains of Russia have no visible connexion with the other European mountains. The woody heights of Valdai and Duderhof seem to form their centre, from which a number of secondary branches diverge, like radii, into the surrounding

country. The British, Irish, and Icelandic mountains are all of secondary rank.

Volcanoes.] There are only three volcanoes properly so called, in Europe; viz. Etna, Vesuvius, and Hecla. Besides these, however, there are nine *jukels* in Iceland, and two mountains upon Stromboli and Milo, which emit flames. Some naturalists assert that there are two great subterranean fires under Europe, one of which cuts the first meridian of the Arctic polar circle, and the other extends under Italy and the Mediterranean, towards the Archipelago.

Climate.] The greater part of Europe is situated within the northern Temperate zone; about a twelfth part only of its superficies extends within the Arctic polar circle. Although the astronomical climates are greatly modified in this part of the world by physical causes, we may, in taking a general view of the climate of Europe, consider it divided into four different districts, the boundaries of which are defined by parallels of latitude.

Arctic District.] The Arctic district begins at the 65th parallel, and runs up to the highest north. On the northern skirts of this region, nature cannot nourish a tree, nor the industry of man produce a field of corn; all vegetation dies away, except that of the rein-deer moss, destined for the support of the only animal which can bear the rigour of this dreary and desolate clime. Yet it is to be observed that certain species of grain, particularly barley and oats, are cultivated in Norway at the 70th degree, whilst, on the opposite coast of America, such cultivation ceases at the 52d. The fir, or *pinus abies*, is found in the whole of Europe within the 67th parallel; and the wild pine reaches to the 68th.

Cold District.] The cold district falls between the 65th and 55th parallels. This region is much milder than the preceding one; but the eastern part of it, which is exposed to the winds which sweep over the high and cold plains of Asia, is much colder than the western part. Thus, the climate of Christiana in Norway, which is defended from the eastern winds by a rocky barrier, is much milder than that of Petersburg under the same parallel. On the other hand, the vicinity of the Atlantic Ocean renders the western climate more humid, and the conflicts between the maritime and continental winds occasion sudden and extreme variations in the state of the atmosphere.

Temperate District.] The temperate district comprehends the region lying within the 55th and 45th parallels. Here the climate is mild and alike genial to animal and vegetable life. This is the native country of corn and wine in Europe. It has been observed here that the cold in the northern districts has considerably increased within the last three or four centuries,—a circumstance which some ascribe to the influence of the advancing masses of ice in the Polar regions, and others to the destruction of the forests in France and England. A great part of central Europe, on the north and west of the Alps, descends by a continued inclination towards the Baltic, the North Sea, and the Atlantic; and it is found that the countries on the lowest level of the northern boundary of this inclined plain, possess a temperature little inferior to the more southern and more elevated districts. Thus Normandy is not much colder than Burgundy, and the winter in Denmark is not much longer than the same season in Bohemia.

Warm District.] The warm district extends over the countries of

Europe lying below the 45th parallel. In the peninsulas and islands of the south of Europe, the most beautiful vegetation under the most delicious climate occurs. Here an almost perpetual spring reigns; the sugar-cane attains tropical luxuriance in Sicily and Granada; the orange perfumes the air; the streams meander between banks clothed with rose-laurels and myrtles; the acanthus blooms on the ruins of departed greatness; the cypress overshadows the public cemeteries; and the vine and the olive constitute the wealth of the husbandman.

Following the division now proposed, the Arctic district of Europe extends over a superficies of about 400,000 square miles, and the warm district may be estimated at 540,000 square miles; while upwards of 1,500,000 square miles belong to the cold, and 970,000 to the temperate.[9]

Animals.] With the exception perhaps of Australia, Europe in natural fertility of soil, and variety and richness of productions, is much inferior to any other division of the earth. Zimmermann asserts that it has only sixteen species of indigenous animals, and these chiefly mice and bats. Some species of wild animals have entirely disappeared before the increase of population, while others have become extremely rare.—Thus, according to Aristotle, the lion was once found in Greece, but it no longer exists in Europe. The buffalo, the elk, the stein-buck, and the beaver, are becoming daily more rare in Europe; and the varieties of game—which once seemed to possess, under the protection of merciless tyrants, a fuller right in the soil than man himself—are now confined to juster limits. The rein-deer and dog are the only domestic animals of the Polar zone. The walrus, white bear, and blue fox, appear on the shores of the Frozen Sea. The horse is found to the 66th parallel, but in the high latitudes is reduced to a dwarfish stature; cattle too lose their horns in the northern regions, and shrink in size; even man himself appears here an inferior species, whether physically or morally considered. Some Asiatic animals are found in the neighbourhood of the Caspian and Sea of Azof. The black bear, the urus, and the wolf, are the most formidable wild animals now known in Europe; and the lynx and wild-cat

[9] The following table from Malte Brun exhibits the mean annual temperature of various districts in Europe, according to the Centigrade Thermometer.

	Upsala.	Copenhagen.	London	Paris.	Geneva.	Zurick.	Buda.	Rome.	Palermo
January	—5.49	—1.54	+1.92	+2.99	+1.16	—3.17	—2.69	+7.18	+10.78
February	—2.98	—2.67	3.27	4.01	2.87	0.94	+0.65	8.18	10.78
March	—1.48	—1.11	5.95	6.14	5.86	4.51	+3.64	10.71	12.11
April	+4.54	+5.89	7.80	10.46	9.74	7.58	9.63	13.71	14.51
May	+9.55	11.63	11.95	13.60	16.75	15.30	18.37	18.11	17.71
June	14.54	16.80	15.16	16.64	17.06	16.35	20.19	21.58	20.46
July	17.07	18.30	16.66	17.98	17.72	18.68	21.82	23.18	22.38
August	15.75	16.68	16.46	17.56	14.70	18.43	22.01	22.88	23.18
September	10.97	14.28	13.54	15.10	10.85	14.14	16.77	20.07	21.57
October	6.03	8.65	9.09	10.03	18.01	9.60	11.01	16.77	19.77
November	0.08	3.28	4.99	6.18	5.03	3.58	4.69	12.07	15.57
December	—3.95	—1.20	2.57	2.77	2.22	—1.21	0.50	8.48	12.30
Winter	—4.14	—1.80	+2.58	+3.26	+2.08	—1.15	—0.85	+7.95	+11.31
Spring	+4.21	+5.47	8.57	10.07	9.78	+9 13	+10.55	14.18	14.78
Summer	15.79	17.26	16.09	17.39	17.16	17.82	21.34	22.55	22.02
Autumn	5.69	8.73	9.21	10.44	10.12	0.10	10.82	16.30	18.97
Annual	+5.39	+7.42	+9.12	+10.29	+9.79	+8.73	+10.45	+15.24	+16.77

attain considerable dimensions in the Italian forests. Europe, though not wholly free of dangerous reptiles, suffers less from their presence than any other region of the globe. The mosquito is troublesome in the highest north; and flights of locusts occasionally arrive in Taurida from the African or Syrian coast.

Vegetables.] Europe is indebted for its most valuable plants to other climes. Originally it probably possessed little more than forest-trees, a few shrubs, and some species of grass. The cereal and leguminous plants are now universally cultivated, and garden-herbs are here usually of finer quality than elsewhere. The vine is successfully cultivated at Witzenhausen under 51° 21′ 30″, and at Zullichan under 51° 58′; but, with these exceptions, wine manufactured above the 50th parallel does not deserve the name. The northern countries furnish good materials for the carpenter and ship-builder. The forest-trees of the warmer climate are tamarisks, carubes, sumachs, mastics, the cork-tree, planes, sycamores, and cypresses.

Minerals.] Every species of the inferior and superior metals, and even several of the more precious minerals, are found in Europe. Hungary and Transylvania possess the nobler ores; Russia, Sweden, and Norway, abound in iron; England produces copper and tin; and Scotland, lead. There are likewise extensive mines of rock-salt, alum, saltpetre, and coal, in Europe.

Population.] It is difficult to estimate the precise amount of the population of Europe, notwithstanding the accuracy with which the census of most countries has been taken: for we do not possess a census of contemporary surveys, and in Turkey the population can only be loosely estimated from the number of hearths paying tax to the Porte. The population-returns of Russia, Hungary, Spain, and Transylvania, are very old. In 1787, Zimmermann estimated the population of Europe at 144,000,000; at present, according to Malte Brun, it is not likely to be overrated at 205,000,000. In 1819, Hassel estimated it at 180,550,000. Perhaps 200,000,000 will be pretty near the truth, which gives an increase of 56,000,000 in 40 years. This population is not equally concentrated throughout Europe. Thus, in the Dutchy of Lucca, it is in the ratio of 288 to a square mile; while in Iceland and Färoe it is only 1⅝; in the Netherlands it is as 212, in Great Britain as 178, and in Sweden and Norway as 10 to the square mile. Upon the whole, the south of Europe is more populous than the north in proportion to its extent: and must continue so, as the means of subsistence are procured with so much greater facility in the countries of the former than in those of the latter. The climate of Norway is quite as favourable to longevity as that of Lucca; but the one comprehends a vast tract of rugged, untillable surface,—the other is a garden throughout.

European Population.] The mass of European population neither consists of insulated nations nor of closely related tribes. The leading nations, according to Hassel, are:

1*st*, The *German nations*, predominant in Germany, the Netherlands, Switzerland, Great Britain, Denmark, Norway, Sweden, and Eastern Prussia. All these nations speak different dialects of the German language.

2*d*, The ***Roman nations***, the descendants of these tribes which overthrew the Roman Western Empire, and settling in the subjugated coun-

tries, adopted the Roman or Latin language, which they however modelled upon their own dialects. Hence arose the mixed languages, called the Roman dialects, spoken at this day by the French, Italians, Spaniards, Portuguese, and Wallachians.

3d, The *Slavonian nations*, divided into numerous tribes, whose languages are kindred dialects. They consist of the Russians Proper; the Poles, Lithuanians, Letts, and Kurians; the Kassubes in Pomerania; the Wendes in Pomerania and Silesia; the Bohemians; the Slawakes in Moravia and Hungary; the Croatians; the Reizes in Hungary and Russia; the Morlacks in Dalmatia and the Ionian Islands; the Montenegrians in Turkey; and the Bothnians, and the Uskoches in Dalmatia.

4th, The *Finnic nations*, including the Finns Proper, the Esthonians, the Livonians, the Lapps, and a mixed race, called Magyars, inhabiting Hungary and Transylvania, and by several viewed as a distinct nation.

5th, The *Tartaric nations*, divided into the following branches: the Turks, the Bulgarians, considered by some as Slavonians, the Tartars of Kasan, the Taurian Tartars, and the Nogaiens in Kherson and the Crimea.

Besides these principal nations, we may enumerate many distinct races in Europe. Such are the Greeks, the Arnauts, the Cimmerians, the Caledonians, the Basques, the Maltese, the Circassians, the Samoiedes, and the three scattered tribes of Armenians, Jews, and Gypsies.

Religious Sects.] There are three great monotheistical systems of religious belief predominant in Europe, viz.:—

1st, *Christianity*, of which the principal seat and centre, though not its birth-place, is Europe. The nations assuming to themselves the title of Christian, in Europe, are divided into three leading sects, viz. *1st*, The Greek, or Eastern Church, which prevails in Greece, part of Albania, and Bulgaria, in Servia, Slavonia, Wallachia, Moldavia, and Russia. The number of members belonging to it, in Europe, amounts to 50,000,000. *2d*, The Latin, or Roman Catholic Church, of which the Pope, one of the sovereign powers of Europe, is the head. This creed is predominant in Italy, Spain, Portugal, France, Austria, the half of Germany and of Switzerland, the Southern Netherlands, Russian Poland, and Ireland, and numbers some adherents in Great Britain, Holland, and Turkey. The total number of Roman Catholics in Europe, amounts to at least 95,000,000. *3d*, The Protestant Church, which predominates, under different creeds, in Denmark, Sweden, Norway, Great Britain, Prussia, a part of Germany and of Switzerland. This faith has also numerous professors in Hungary, Transylvania, and France. Its principal branches are the Lutheran, the Presbyterian, and the Episcopalian Church, and it may embrace about 47,000,000.

2d, *Mahommedanism*, or *Islamism*. This religion is professed by the Turks and other Tartarian hordes, the Circassians, and a part of the Arnauts. Its European votaries have been estimated at about 5,000,000.

3d, The *Mosaic*, or *Jewish* religion. There are about 2,500,000 Jews scattered throughout Europe. They are not tolerated in Spain, Portugal, and Norway. In the Austrian States they have few privileges. In Great Britain their situation is not quite satisfactory. In Russia the laws relating to them have recently become very intolerant. In the States of the Confederation, in France, Prussia, and the Low Countries,

they enjoy the rights of citizens, and, in Poland, they are even eligible to public employments.

Pagans no longer exist in Europe: not even among the Lapponians, though that nation was the last in Europe to adopt Christianity. But in the north-east corner of Europe, upon the borders of the Icy Sea, there is a whole tribe which may be called Pagans, for, besides a belief in a Supreme Being who has created all things, they pay divine honours to the Evil Spirit, and employ enchanters. These are the Samoiedes; of whom, however, many proselytes have recently been made by the exertion of Christian missionaries.

Classes of Society.] In almost every European State, we find the citizens divided into four distinct classes. The first is that of the nobility, which exists in every State, with the exception of Norway and the Turkish empire. Nobility is, in most cases, viewed in Europe as an hereditary rank; but it can be acquired by the will of the sovereign, and even in some instances, purchased by money. The clergy form the second class of the community. The third is that of the citizens, or inhabitants of towns, which in most countries enjoys peculiar rights and privileges. The fourth and lowest class includes the peasants, and forms the mass of the population in every country.

Industry and Commerce.] With the exception of the Nogaiens, Lapponians, and Samoiedes, in Russia, who yet lead the life of herdsmen or hunters, all the nations of Europe have been permanently located for many centuries. The cultivation of the soil has therefore been carried to great perfection in this part of the earth. Husbandry is pursued with the greatest industry, in the British empire, the Netherlands, Switzerland, Germany, some parts of Italy, Denmark, and Sweden. The agriculture of the east of England and Scotland, the Netherlands, Germany, and the northern parts of France and Italy, is most distinguished; although Russia, Hungary, and Poland, whose agriculture is not nearly so advanced, are the granaries of Europe. The rearing of cattle is in some countries pursued only in connexion with agriculture; in the mountainous districts alone it forms the principal branch of rural industry. The cultivation of fruits belongs to the temperate districts, particularly France and Germany; but the finer fruits can only be extensively reared in the southern parts of Europe. The manufacture of wine is most considerable in France, the south of Germany, Hungary, Spain, Portugal, Italy, and the Turkish empire. The finest kinds are produced in Tokay, upon the Chalk Hills of Champagne, the Gold Hills of Burgundy, the banks of the Rhine and Garonne, in Spain, the two Sicilies, the banks of the Upper Douro, and some islands of the Ægean Sea. The olive belongs to the warmer regions, particularly Apulia Atino, in the Neapolitan territory of Terra di Lavora, and Spain; the other vegetable oils are produced in the temperate part of Europe. The rearing of silk-worms is also peculiar to warmer climates, and is chiefly carried on in Lombardy. The cultivation of forests has been greatly neglected in most countries, and in many a very sensible want of wood begins to be felt, although Europe is, on the whole, well-stocked with wood.[10] Fishing is peculiarly important to the coast-

[10] Europe was doubtless covered with primitive forests, previous to its being populated from Asia. These forests disappeared before the gradual advance of the original Nomade tribes, from N. E. to S. W. France was pretty well cleared of forests in A. D. 950, though they existed a much longer time in Germany. Mountainous districts

nations of Europe, who take herrings, tunnies, anchovies, mackerels, and various other species of fish, from the surrounding seas. Hunting forms a principal occupation only to a few small tribes in Russia. Mining is conducted with great skill in England, Germany, Hungary, and Sweden.

European industry is rivalled by no other part of the world, either in the diversity or the extent of its productions; although the Japanese and Chinese have cultivated some branches of art for many thousand years. Europe not only manufactures its own raw produce, but also that of almost every other region of the earth. The principal seats of European industry are Great Britain, the Netherlands, France, Germany, and Switzerland. The best woollen fabrics are made in England and France; cotton in England, Saxony, and France; linen in Germany; lace in Brabant; silks in France; paper in Holland and Switzerland; leather in Turkey and Russia; china in Germany; earthenware in England and France; glass in Bohemia and England; hardwares in England; bijouteries in France and England; millineries in France; straw-hats in Italy; and jewellery-work in France, Germany, and England.

The internal commerce of Europe is carried on in all countries with considerable animation, and is facilitated by well-constructed high-roads and canals, which are particularly good in the British empire, the Netherlands, France, Lombardy, Prussia, and Russia. The British, French, Danes, Netherlanders, Swedes, Hanseates, Ragusans, and Hydriots, are most distinguished in navigable commerce. But no nation can in this respect be compared with Great Britain, whose fleets are in every sea, and colonies in almost every region of the earth. As a medium of exchange, all European States coin money. Many States likewise support a paper-currency, the imaginary value of which is maintained upon public credit. A prodigious quantity of money has been coined in Europe; but the ready money in circulation can scarcely exceed 2000 millions of florins, of which the greater part is in circulation in Germany and France.

Natural Divisions.] In respect of natural position, Europe may be divided into Western and Eastern Europe. The first comprehending the Pyrenean Peninsula, the countries on the south and north of the Alps, the islands of the North Sea, and the countries of the Baltic; the latter including the countries on the north and south of the Carpathian Mountains.

Political Divisions.] In political respects, Europe is divided into the following States, viz.:—

Three EMPIRES, viz. 1. Austria; 2. Russia; 3. Turkey.

Seventeen KINGDOMS, viz. 1. Bavaria; 2. Denmark; 3. France; 4. Great Britain and Ireland; 5. Hanover; 6. Italy; 7. Naples; 8. Netherlands; 9. Portugal; 10. Prussia; 11. Saxony; 12. Sardinia; 13. Sweden and Norway; 14. Spain; 15. Wirtemberg; 16. Poland; 17. Hungary.

Six GRAND DUTCHIES, viz. 1. Hessen-Darmstadt; 2. Baden; 3. Weimar; 4. Mecklenburg-Schwerin; 5. Mecklenburg-Strelitz; 6. Tuscany.

One ELECTORATE viz. Hessen-Cassel.

preserve their forests longest, on account of the difficulty of transportation. The mildness of the climate in Spain and Turkey renders the destruction of the forests, for fuel, less necessary. Greater attention is paid to the growth of wood in Germany and Switzerland, than in Italy and France. Austria is covered with forests. Moravia is well-wooded; Bohemia less so. Hungary has much wood; and Transylvania possesses it in abundance. But the best wood for ship-building is furnished by Russia, Norway, and Sweden. Britain affords some noble timber, but in small quantity.

Thirteen DUTCHIES, viz. 1. Anhalt-Bernburg; 2. Anhalt-Dessau; 3. Anhalt-Köthen; 4. Brunswick; 5. Lucca; 6. Modena; 7. Nassau; 8. Oldenburg; 9. Parma; 10. Sachsen-Gotha; 11. Sachsen-Hildburghausen; 12. Sachsen-Coburg; 13. Sachsen-Meiningen.

One LANDGRAVIATE, viz. 1. Hessen-Homburg.

Ten PRINCIPALITIES, viz. 1. Hohenzollern-Hechingen; 2. Hohenzollern-Sigmaringen; 3. Liechtenstein; 4. Lippe-Detmold; 5. Reuss of the Elder Line; 6. Reuss of the Younger Line; 7. Schwarzburg-Rudolstadt; 8. Schwarzburg-Sondershausen; 9. Lippe-Schauenburg; 10. Waldeck.

One ECCLESIASTICAL STATE, viz. the State of the Church.

Eight Republics, viz. 1. Switzerland; 2. Ionia; 3. San Marino; 4. the Free Towns of Hamburgh; 5. Lubeck; 6. Bremen; 7. Frankfort on the Main; 8. Cracovia.

EUROPEAN

RUSSIA AND POLAND.

Extent.] THE gigantic empire, on the geography of the European part of which we are now entering, greatly exceeds in magnitude the largest monarchy of ancient or modern times. The Roman empire, in its most magnificent days, hardly equalled in extent a fourth part of the Russian autocrat's dominions; and the vast Asiatic empire of China is at least one-third part inferior in superficial territory. Of the empires formed by Alexander the Great, Taimur, and Chengîz Khan, only the last equalled that of modern Russia; but while the three former quickly sunk under their own weight, Russia has gone on consolidating and augmenting her territories, until she has become mistress of nearly a seventh part of the habitable globe. According to the best charts, the Russian States, including Poland, but without reckoning the colonies on the north-west coast of America, present a superficial extent of 7,491,491 English square miles, of which 1,626,630 square miles, being eight times the area of France, and fourteen times that of the British Isles,[1] with a population probably amounting now to 50,000,000, belong to European Russia.

Boundaries.] The whole northern boundary of European Russia is formed by the Great Icy Sea, whose unknown waters separate it from the North Pole. On one small point the boundaries in this quarter run along the Norwegian frontier, and are thence conducted to the Icy Sea by the Skiekem Jok, the Tana, and the Paswig. On the east, European Russia is bounded by its own Asiatic provinces,—Siberia, Kasan, and Astrachan; on the south by the Kuban, the Black Sea, and the Turkish empire; on the south-west by the latter empire, and that of Austria; and on the west by the kingdom of Prussia, the Baltic, the Bothnian Gulf, and Sweden. The boundaries of Poland, towards Austria and Prussia, have been fixed by treaty, and will be afterwards noticed. The south-western boundaries, towards Turkey, are formed by the Pruth and the Danube. On the Swedish frontiers the boundary line joins that of Norway, runs down the Muonia till it passes Kengis, and thence follows the course of the Tornea till it falls into the Gulf of Bothnia. The

[1] Wichman reckons, exclusive of Poland, Bessarabia, and Moldavia, and the Caucasian highlands, which altogether amount to 97,282 square miles, 7,397,356 square miles as the superficial extent of the whole Russian empire; a calculation which comes pretty near that of Hassel's given in the text. Lichtenstein, says 7,503,559 square miles, of which he gives 1,589,546 to European Russia. Crome agrees with Hassel. Graberg reckons to European Russia, exclusive of Poland and Moldavia, 1,366,145 square miles, and to Asiatic Russia, 5,952,744; or 7,318,889 square miles to the whole empire. According to Professor Kraft of the Academy of Sciences at St. Petersburg, the Russian empire, previous to 1783, contained 6,601,120 square miles, including the inland seas, but exclusive of the bays and gulfs. But since that period, numerous acquisitions have been made at the expense of Poland, Prussia, Austria, Sweden, Turkey, and Persia.

Aland group of islands belongs to Russia. The most undetermined boundaries are, as we have already explained, those on the Asiatic side. In the political divisions of Russia, indeed, no attention has been paid to natural limits; and were we to follow the boundaries in this quarter proposed by Hase and Pallas, we should have to divide the governments of Kasan, Astrachan, and Siberia, between Europe and Asia; but these districts are in every feature so decidedly Asiatic, that we shall reserve our descriptions of them till we come to that division of the earth. The island of Nova Zembla, and the lands of the Cossacks of the Don and of Tshernomorsk, will be included under our present head, on account of their intimate connexion with the European State.

General Divisions.] The European part of the Russian empire may be divided as follows:—

	Extent in English square miles.	Population in 1819.
1. The Provinces of the Baltic, .	195,365	3,857,261
2. Great Russia, ...	955,168	21,216,292
3. Little Russia, ...	90,772	6,136,300
4. Southern Russia, . . .	195,668	2,470,828
5. Western Russia, . . .	142,113	8,480,022
6. Kingdom of Poland, . .	47,544	3,472,500
Total Extent and Population,	1,626,630	45,633,203

The population, therefore, is nearly as 22 to the square mile.

CHAP. I.—HISTORY.

Ancient History.] Under the common appellation of Scythians and Sarmates, a multitude of Nomade tribes were anciently comprehended. These northern hordes, at a very early period, began to menace the Roman frontiers, and even before the time of Cyrus had invaded what was then called the civilized world, particularly Southern Asia. They inhabited the countries described by Herodotus between the Don and the Dnieper; and Strabo and Tacitus mention the Roxolani, afterwards called Ros, among the Sarmatian tribes dwelling in that district. The Greeks early established commercial colonies here; and in the 2d century the Goths came from the Baltic, and, locating in the neighbourhood of the Don, extended themselves to the Danube. In the 5th century, the country in the neighbourhood of these rivers was overrun by numerous migratory hordes of Alans, Huns, Avarians, and Bulgarians, who were followed by the Slavons, a Sarmatian people, who took a more northerly direction than their predecessors had done. In the next century, the Khozari,[2] pressed upon by the Avarians, entered the country between the Wolga and the Don, conquered the Crimea, and thus placed themselves in connexion with the Byzantine empire.[3] The Petshenegri an affiliated tribe of the Khozari, appear at a very early period on the banks of the Caspian. They directed the course of their migrations towards the west, forced the Hungarians into Pannonia, and occupied the country between

[2] The Khozari, a Turki tribe, inhabited to the north of the Caspian, in the middle of the fifth century; and, according to Moses of Chorene, had their Khakan, or great Khan, and their Khatune, or Princesses.

[3] The empress Irena was an Avarian princess.

the Don and the Alauta, while the Tchoudes, a tribe of the Finnic race, inhabited the northern parts of Russia. All these tribes maintained themselves by pasture and the chase, and exhibited the usual barbarism of wandering Nomades. The Slavonians coming from the northern Danube, and spreading themselves along the Dnieper, in the 5th and 6th centuries, earliest acquired, from a commerce with their southern neighbours, habits of civilized life, and embraced the Christian religion. They founded in the country afterwards called Russia the two cities of Novogorod[4] and Kief, which early attained commercial importance. Their wealth, however, soon excited the avidity of the Khozari, with whom they were compelled to maintain a perpetual struggle; and Novogorod found another and a more formidable enemy in the Varangians, a race of bold pirates who infested the coasts of the Baltic.[5] These fierce warriors threatened the rising State with devastation; and the necessity of self-preservation prompted the Slavonians to place themselves under the protection of Ruric, a Varangian chief, who, in 862, arrived with a body of his countrymen in the neighbourhood of the Lake Ladoga, and laid the foundation of the present empire of Russia, by uniting his people with the natives of the country under the common appellation of Russians. Ruric died in 879, and was succeeded by his son Ighor, who conquered Kief, and removed the seat of government to that place from Novogorod. Ighor's widow and successor, Olga, publicly embraced Christianity at Constantinople in 955, and attempted, but without success, to introduce the Greek ritual amongst her people. Her son Sviatoslaf, after conquering Bulgaria, and even threatening Constantinople itself, fell in battle against the Petshenegri near the cascades of the Dnieper, in 972.

Vladimir.] Vladimir, his third son, ascended the throne after the death of his two brothers in 981. He married the Greek imperial princess Anna Romanofna, in 988. Having embraced Christianity, his example was followed by his subjects. Michael Syra was appointed by Photius, patriarch of Constantinople, and his synod, Metropolitan of the Russian empire, which was now considered as belonging to the Eastern church; and from this period the attachment of that empire to the Greek ritual may be dated. Vladimir died in 1015, leaving the inheritance of his kingdom to his twelve sons. The merits of this prince appear to have been considerable. He has been extolled by the monks whom he introduced into his dominions, as the wisest as well as the most religious of kings; his zealous exertions in promoting the profession of Christianity

[4] Novogorod, *i. e. Novus hortus*, 'new enclosure.' It is well known that the Russians convert *h* into *g*. Thus, *hospodar* is by them written *gospodar*.

[5] The ancient Scandinavians bore different names in the different countries which they seized upon or invaded. Thus in England they were called *Danes*; in France, *Normans*; in Russia *Varager*, or *Varjager*, *i. e.* 'wandering huntsmen,' or 'adventurers.' The Tchoudes in Finland called them *Ruotsi* or *Rutzi*, which means 'travellers,' 'strangers,' 'adventurers.' Hence some antiquarians trace the modern name of *Russians* in Byzantine history, before the time of Ruric. Nestor calls Ruric and his brothers *Mjomtzis*, or Germans; and asserts that the name *Russians* became current only after Ruric had by his prowess exalted the Varangians to predominant power among the Slavonians. Thuanus and Schlozer say that the three brothers were Scandinavians or Normans; while Ewers, but without assigning any reasons for his opinion, asserts that they were Khozari. Probably Ruric and his followers came first from Wagria, from the then known sea-port of Aldeigaborg, now Oldenburg. They were perhaps Frisians or Jutes. Ruric gave the name of Aldeigaborga to the first place at which he established himself in the neighbourhood of Novogorod, a name which is still preserved in the word *Ladoga* formerly *Aldoga*.

throughout his dominions acquired for him the title of Saint;[6] and like our own Alfred, succeeding historians, comparing the virtues of his character with the age in which he lived, have united in conferring upon him the appellation of Vladimir the Great. It is certain, that on his accession to the throne, he found his subjects sunk in the grossest ignorance; and that, like the English prince, he adepted the best means of exalting the national character by the establishment of schools for the instruction of his people, and the protection and encouragement which he afforded to learned foreigners. His spirit, too, was bold and enterprising; and he made considerable progress in consolidating his dukedom, and subduing the surrounding tribes. The civil wars which ensued after Vladimir's death, and which prepared the way for the subjection of the country to a foreign yoke, have indeed been attributed to his impolicy in making a partition of his dominions. But it was doubtless his intention, that, while his sons shared among themselves the principalities of the State, they should, according to the custom of the Slavonians, form a single confederacy, united under one of their number as Grand Duke, whose dutchy was the territory of Kief. But the small principalities into which the Russians were divided, exercised perpetual rapine and violence against each other, while the uncertain succession to the Grand Dukedom proved a fertile source of domestic convulsion. Swatopolk I. waded to the throne through the blood of three of his brothers, and was in his turn hurled from that eminence by his brother Jaroslav, who reigned from 1014 to 1045. A wise policy marked the rule of this prince. The progress of Christianity, which was already considerable, was promoted by his exertions; and besides conferring many important privileges on the mercantile citizens of Novogorod, for whose use he also enacted a body of equitable laws, he built a number of towns throughout his dominions. It would appear, that the exact rule of succession to the Grand Dukedom was either unknown or not strictly observed; for in 1114 the inhabitants of Kief chose Vladimir II., descended from a younger line of the first house of that name, for their Grand Duke. This prince reached not the fame or authority of his ancestor, although he was acknowledged as Tzar[7] by the Byzantine emperor Alexis Commenus, and was the first whose brow was graced with the imperial crown of Russia. George succeeded to his father, and built Moscow in 1147; but the ceaseless insurrections and calamities which had been weakening the strength of the Russian State since the death of Vladimir the Great, facilitated the enterprise of the Monguls, who, having vanquished the Poles, or Slavons of the plain—to whose assistance the Russians hastened but too late—again defeated the allied forces of their opponents in a great battle fought upon the Kalka in 1225, and menaced the existence of the Russian nation. These invaders committed great devastations; and after the death of George II., who was killed in battle against the Khan Batu near Sita, in 1238, the whole kingdom, with the exception of Novogorod, which preserved its independence by treaties, fell into the hands of the Monguls. Hitherto the Russian State had made comparatively small progress in civilization: a circumstance to be attributed to the variety of

[6] Queen Catherine II., on the 22d September, 1782, founded the order of *St. Vladimir*, in honour of this prince.

[7] The title *Tzar* is a Slavonic translation of the Tartar *Khan*, or king. In their translation of the Old Testament, it constantly occurs in this sense; the Tzar Solomon, or Tzar David, being the ordinary terms used.

nations of which it was composed, and to the military constitution inherited from the Varangians. Commerce remained chiefly in the hands of those German merchants who had followed the Christian missionaries who came from the Düna into Russia after the commencement of the 13th century; and the principal seats of this commerce were the towns of Novogorod and Kief. The traffic with the south was mostly under the management of Greek merchants. From the introduction of Christianity there had been monasteries in Russia; and in these establishments the scanty literature of the age was preserved; the monks were the only annalists of the country's history, and of their chronicles there exists a long series reaching from 1113 downwards. Though reduced to grievous servitude by their Asiatic conquerors, and obliged to pay an annual tribute to the Golden Horde, the Russians successfully resisted the attempts of new enemies which appeared in the Livonians, the Teutonic knights, and the Swedes. Jaroslav conquered Finland, but perished by poison among the Tartars. His son Alexander defeated the Danes and Swedes in 1241. in a great battle upon the Neva, and received for this action the appellation of Alexander Nevsky.[8] His youngest son Daniel mounted the throne in 1247. He removed his residence to Moscow, and in 1296 assumed the title of Grand Duke of Moscow. This prince founded the celebrated palace of the Kremlin in that city in 1300. George succeeded to his father Daniel. He successfully resisted the Swedes, and built the town of Orshek, now Schlussenburg. Demetrius Donsky rebuilt the Kremlin of stone, and obtained several advantages over the Asiatic hordes now bearing the name of Tartars; but found himself unable to get rid of the burdensome tribute imposed by these invaders.

Middle History.—Ivan I.] More happy were the Russians under Ivan Basilovitch I.,[9] surnamed the Great, who mounted the throne in 1463, and who, in a fierce struggle, from 1477 to 1481, succeeded in freeing Russia from the dominion of the Tartars.[10] The power of the Khans of Kaptshak had indeed been long weakened, partly by national dissensions, and partly by Taimur's conquests; but the Lithuanian and Swedish war had also too much exhausted the Russians themselves, to admit of their embracing the opportunity to shake off a foreign yoke. It was about this period that the Cossacks first appeared in history. The Poles and Lithuanians had conquered all the Russian dominions as far as Kief, and afflicted the subjugated people both by their religious zeal and their military prowess. On the east, too, pressed the Crimean Tartars. Hence, a great body of the inhabitants retired into the fertile but uninhabited regions of the Ukraine, where they settled themselves under a military constitution, at the head of which stood an *Ataman* or Headsman, to whom were joined in council the elders or *stannshins*. Ivan declared the unity and indivisibility of the empire a

[8] This Moscovian hero was born in 1218. The gratitude of his country has exalted him to a Saint. Peter the Great built a magnificent convent at St. Petersburg, on the spot where Alexander gained his great victory, and further honoured his memory, by founding the Order of *St. Alexander Nevsky*.

[9] Few families, in Russia, have particular surnames. Individuals are generally distinguished by their Christian names, with the addition of a family name, formed, for the most part, of the name of their father, combined with the particles *vicz*, pronounced *vitch*, *of* or *ef*. Thus *Ivan Ivanovicz*, or *Ivan Ivanof*, 'John the son of John.' Peter *Alexeowicz*, or *Peter Alexeof*, 'Peter the son of Alexis.' In the family name of a lady, the particle *ovna*, pronounced *ofna*, is used; thus, *Maria Ivanovna*, 'Maria the daughter of John.'

[10] From the period of Ivan's marriage with the Grecian princess, Sophia Paleologus, the Russian imperial crown has borne the double eagle.

fundamental law of the constitution; he firmly repressed the turbulent spirit of his nobles, re-established the ancient limits of the empire, and reduced Kasan to a dependance on the Russian crown. This monarch likewise introduced the use of fire-arms. Zoë, his queen, also did much for the improvement of the people. Under Ivan's son, Vassili, the authority of the Russian grandees was still farther abridged. In a war with Poland, Vassili conquered Smolensk; but the Crimean Tartars devastated the country, and their allies, the Poles, repeatedly defeated the Russian forces. The emperor Maximilian, of Germany, with the view of uniting the princes of Christendom against the Mahommedans, laboured to appease these contentions. The learned Baron Herberstein,[11] was sent as ambassador to the Czar, from the Emperor; and Pope Clement VII. also attempted to win over the Russian Grand Duke to the Roman Church, and prepared to confer on him the royal title. But Poland did not associate itself in the great league; and Ivan remained inactive with regard to it. Ivan Basilovitch II. did more than all his predecessors to promote the civilization of his subjects. At his invitation, German artificers, artists, and scholars, proceeded from Lubec to Russia: printing-offices were established; laws enacted; and a treaty of commerce entered into with England, whose merchants had found their way by the North Cape to Archangel.[12] This prince likewise first formed a standing army, in the *Strelitz*, or body-guard of archers. In 1552, he conquered Kasan; and in 1554 took possession of the kingdom of Astrachan, and the provinces of the Caucasus. He likewise began to think seriously of driving the Teutonic Knights from Livonia; and having unsuccessfully attacked them in 1558, he declared, in 1569, Prince Magnus of Denmark, king of Livonia under his protection. But he was disappointed in his expectations. Poles, Swedes, and Danes united against him, and resisted with success his arms. In this emergency, the danger of which was heightened by a conspiracy formed in the interior of the empire, Ivan addressed himself to the Emperor Rodolph II. and to Pope Gregory XIII. The latter despatched his nuncio, Possewin, to the Russian court, who negociated the peace of Zapolcia, in 1582, between the Russian Grand Duke and Stephen Bathory, king of Poland. In this peace, Russia resigned its claims upon Livonia to Poland. Towards the close of Ivan's government, Siberia was discovered in 1578, by the Cossack Jermak; but the conquest of that country was only accomplished in 1587, under his successor Feodor. The latter prince, in the peace of 1595, gave up Esthonia to Sweden. After his death, the royal line of Russia was extinguished; and Russia was convulsed by twenty years of

[11] It was through this learned diplomatist that the west of Europe became more acquainted with Russia. He is particularly known by his estimable and useful work, *Commentarius Rerum Muscoviticarum*, which has been frequently translated, and is pronounced by all authors who have written on Russia, the best and most authentic account of the early period of that kingdom.

[12] Sir Hugh Willoughby commanded this expedition, the expenses of which were defrayed by a society or company of gentlemen and merchants, for the discovery of unknown countries, the plan of which seems to have originated with the famous Sebastian Cabot. The undertaking was supported by a subscription of L.6000, and was intended chiefly to explore a shorter and easier passage to Cathay, as China was then called. Sir Hugh reached the 72° north latitude, but perished with the crews of two of his ships under the excessive cold. The third ship, commanded by Richard Chancellor, was more fortunate, in discovering the Bay of St. Nicholas; and Chancellor, landing at Archangel, travelled to Moscow, where he negotiated with the Tzar a very favourable treaty for his country. The same discovery pointed out to the English the way to the whale-fishery at Spitzbergen.

civil dissensions and foreign wars, which greatly retarded the national progress. These domestic struggles were occasioned by the appearance of a pseudo-Demetrius, who gave himself forth as younger son of Ivan II.,[13] and laid claim to the Grand Dukedom. Michael Feodorovitch ascended the throne in 1613. By vigilance at home, and by the peace of Stolbowa, with Sweden, in 1617, and of Divelina, with Poland, in 1618, this prince succeeded in allaying the external and internal troubles of his kingdom.

Modern History.] Michael, son of Nikatiz, the metropolitan of Rostof, descended from the family of Romanof, was elected Tzar in 1613, with limited hereditary powers. This prince was opposed by several parties in the State, and had also to withstand the Swedes, who, under General de la Gardie, again advanced into Russia. But he overcame these obstacles; re-established the old relations of Russia; and reigned prosperously till 1645. During the reign of his son and successor Alexis, the last pseudo-Demetrius was beheaded, in 1653. About this period, the wars with the Turks commenced. Since 1473, and consequently subsequent to the Mongul dominion, the Osmanli Turks had become the neighbours of the Russians; two hundred years afterwards, in 1671, began a contest with them for the Ukraine, which was continued, under Feodor Alexovitch, till 1681. Alexis died in 1676. This prince, and his son, Feodor III., who died in 1682, contributed much to the civilization of the empire. The former established the first posts known in Russia. He also caused native iron and copper mines to be wrought; set a-going some silk and linen manufactures; improved the internal navigation; and sent trading vessels to the north coast of Asia. He likewise new-modelled the *Uloschenije*, or code of laws originally composed by Ivan I., some of which are even in force at this day; and humbled the increasing arrogance of the Patriarch. His son annihilated the pretensions of the nobility to the monopoly of the higher offices of State, by burning their pedigrees,[14] and naming his minor step-brother, Peter, his successor, to the exclusion of the imbecile Ivan. Their ambitious sister, Sophia, found means to get both proclaimed Tzars, and herself associated with them as

[13] The real Demetrius had been probably murdered by the usurper Boris Ghodunov; but later researches have rendered even this suspicion very uncertain.

[14] The nobles had long been acquiring new powers, and were often disposed to exert them in a way which, while it derogated from the dignity of the crown, tended much to oppress the lower ranks. Alexis wished for nothing more than an opportunity of checking his ambitious grandees. At length the opportunity offered itself. The defence of the frontiers was a duty imposed upon the nobles whose possessions lay nearest them. This at first was an arduous task. But when the empire was extended, the boundaries were continually removed; and those who had once been on the frontiers, at length were in the interior. Still, however, the same nobles claimed their former allowances; and while they had nothing to defend, they exacted the profits of defence. Many claimed the office of nominal defence; and each supported his claim by the charters of different emperors. Earnestly seizing an opportunity which he had long desired, Alexis ordered all the nobles to repair to Moscow, and to bring along with them all their charters and archives, that the examination might be complete. A large wooden building was erected for their reception, and a guard was placed for their protection. A day was appointed for the hearing of their respective claims. But when the morning of that day arrived, the nobles had the mortification to see the house which contained their archives in flames. They repaired in a body to the emperor: "Your archives," said Alexis, "are lost; your privileges and your honours belong to the nation, and the nation will protect itself. Henceforward, your rank is to be attached to the service you are actually performing, and colonel Buturlin, though a private gentleman, is to rank before captain Viazemsky, though an ancient prince." Alexis thus established the distinctions of rank founded upon personal service performed to the emperor, which still prevail in Russia; an establishment which, by some, has been attributed to Peter I.

Regent. But, in 1689, she was thrown into a convent, and Peter I. declared sole Tzar. Russia, at this period, extended from Archangel to Azof, but had not yet reached the Baltic. The inhabitants of this vast district formed, however, one nation, united by a common language and religion, and found in this circumstance a powerful defence against their hostile neighbours. The constitution was an unlimited monarchy; and the manners of the Russians were gradually approximating to European civilization. Peter was admirably calculated by nature for making progress with a nation yet in barbarism, and became to Russia what Philip had been to Macedonia. The Macedonians became Hellenes, and the Russians Europeans. His first aim, on coming to power, was the formation of an army modelled on European tactics. In this he was assisted by the foreign officers whom he retained in his service; and a great number of the Hugonots, who had fled to Russia after the abolition of the edict of Nantes, enrolled themselves in his troops. He also vigorously directed his attention towards the naval arts. His father, Alexis, had, by the aid of Dutch carpenters, built a ship upon the Caspian Sea, for the purpose of commerce with the Persians; but this vessel fell into the hands of the Don Cossacks. Two only of the crew escaped, and returning to Moscow, one of these became Peter's master ship-builder. In the year 1693, Peter navigated, in his own ship, to Archangel, then an important place of commerce; he even sailed to Ponij, on the Lapponian coast. Next year, he again visited Archangel with a fleet of his own. Fully alive to the advantages of commerce, he early cast his eyes on the Baltic and Black Sea, into which the principal rivers of Russia discharge themselves. Being already at war with the Turks, he directed his efforts chiefly upon Azof, at the mouth of the Don, where he wished to establish an emporium for the commerce of the Black Sea. Austria, Brandenburg, and Holland supplied him with engineers and artillery; and in 1696, the dock-yards of Voronetsh, upon the Don, equipped an armament of twenty-three gallies, besides other vessels, with which he defeated the Turkish fleet in sight of Azof, and two months afterwards that fortress capitulated. To preserve this key of the Black Sea, Peter directed fifty-five vessels of war to be built; and in the meantime formed a plan for uniting the Wolga and the Don by means of a canal. He sent a number of his young nobles to the Low Countries to learn the art of ship-building, and to Italy to study military tactics; and in 1698, having intrusted the government during his absence to Prince Romadanofski and three Bajars, he himself set out to Holland in the retinue of one of his own embassies. He passed through Esthonia and Livonia—then belonging to Sweden—Brandenburg, Hanover, and Westphalia. From thence he proceeded to Amsterdam, where he wrought some time as a common ship-carpenter without being recognized. Nothing escaped his observation, nothing was beneath his attention; he accustomed himself alike to handle the hatchet and the lance, the pen and the sword. King William III. invited him to England, where, clad like an English sailor, he wrought in the dock-yards, and was often heard to remark, that if he had not been Tzar of Russia, he should have wished to have been an English Admiral.—After a stay of three months in this country, during which he had been admired and caressed by all, and is said to have received the degree of Doctor from the University of Oxford, Peter returned to Russia, carrying with him above five hundred English engineers, artists, and mechanics. A revolt of the Strelitz accelerated Peter's return to Moscow. Sophia

having been suspected of exciting this rebellion, the greater part of the conspirators were hanged before the windows of her convent, and the Strelitz itself dissolved. Personal dislike perhaps induced Peter to accuse his wife Eudoxia of participation in this affair. She was banished to a convent, and compelled to assume the veil under the name of Helena.— On this occasion he founded the order of St. Andrew, for the reward of those nobles who had remained faithful to him, or had pleased him by travelling in foreign lands. Peter now devoted himself to arranging the finances of the State, and reducing the manners of his subjects to his own peculiar notions of propriety. The introduction of the German dress and proscription of beards, form the principal feature in this department of Peter's administration. He also caused the Bajars, or native princes, to reduce the number of their enormous retinues, and established printing-offices and schools throughout the empire. In 1700 he declared against Sweden, and attacked Narva. The young hero of Sweden, Charles XII., instantly hastened thither, and on the 30th November 38,000 Russians were defeated by 8000 Swedes. Peter's was not a mind which could easily be discouraged by misfortune, and he consoled himself with the reflection, that each defeat inculcated lessons of practical experience on his raw troops. On the 27th of May, 1703, he laid the foundations of a new fortress, to which he gave the name of St. Petersburg, and which was constructed under the superintendence of Andrei Tresina, an Italian architect. Before the fortress was finished the Tzar conceived the idea of attaching to it a noble city, worthy of becoming the metropolis of his empire; as whatever he designed was prosecuted with vigour, and executed with alacrity, in a few months the city began to rear itself in truly imperial magnificence, and in 1710 became the residence of the Court. The war with Sweden meanwhile proceeded with alternating fortune, till 1706 when Charles advanced with 43,000 men into Poland, while Peter retired before him, laying waste the country around. The Swedes followed his retreat to the neighbourhood of Smolensk, and then turned into the Ukraine, where they were joined by Mazeppa, the Ataman of the Cossacks. Charles was occupied with the siege of Pultava, when Peter arrived with an army of 70,000 men, and under the walls of that fortress annihilated the Swedish army on the 8th July, 1709. This decisive advantage terminated the war for the present. Next year Peter gave his niece Anna, Ivan's second daughter, in marriage to the Duke Frederic William of Courland. The Turks, at the instigation of the Swedish monarch, now declared war against Russia, and Peter hastening through Moldavia to meet them, arrived on the Pruth, in front of the Grand Vizier Mehmet's camp. The armies successively repulsed each others' attempt to cross that river; but the Russians being surrounded by the Tartar hordes, began to suffer greatly for want of provisions, and Peter saw nothing but captivity or death before him. From this dilemma he was extricated by his consort Catherine, who bribed the Vizier, and by her prudent management prevailed on the Turks to retire. In 1717 Peter returned from a second journey abroad, and found another association formed against him in his absence. Among the conspirators his own son Alexis, born in 1795, was found guilty and condemned to death, but only survived the announcement of his sentence twenty-four hours. After a third destructive war with Sweden, the peace of Nystadt, in which the countries of Livonia, Esthonia, Ingermania, Viburgslehn, and Kerholmslehn, were ceded to Russia was concluded on the 30th

August, 1721. Thus was established, after a violent contest of twenty-one years, the stability and power of the Russian state. Peter the Great died on the 8th of February, 1725, and was succeeded by his wife, the Empress Catherine I. who reigned till 1727.[15] Her successor, Peter II. the son of the unfortunate Alexis, was content to possess in tranquillity the kingdom, and performed nothing memorable during his brief reign.—The Empress Anne, widow of the Duke of Courland, filled the vacant throne in 1730. Under her government the grandees of Russia tried to limit the sovereign authority, but this attempt ended in their disgrace, and the formation of a Russian cabinet of foreigners. This Princess left by will the succession to Ivan III., son of the Princess Anne, and the Prince of Brunswick, an infant then scarcely two months old, who was accordingly elevated to the throne, under the regency of Biron, one of the late Empress's favourites. But this destination dissatisfied the nobles; the regent was driven from the kingdom; the infant Ivan placed in confinement; and the Empress Elizabeth, the youngest daughter of Peter the Great, invested with the supreme command. This princess, though stained with many debasing traits, was of a bold and masculine mind; and under her government it was that Russian influence in European politics first began to evince itself. Russia was the ally of Maria Theresa, in the Austrian war of succession; and afterwards, in 1754, in the seven years' war with Prussia. But instantly upon Elizabeth's death, her successor, Peter III., the son of the Duke of Holstein-Gottorp, and Anna daughter of Peter I., concluded a peace and alliance with Prussia. This monarch inherited not the genius of his great ancestor, and after an imbecile reign of nine months was assassinated, and his wife Catherine II., a princess of Anhalt-Zerbst, filled his place.

Catherine was a woman of licentious manners, yet her reign may be regarded as one of the most glorious and most prosperous in the Russian annals. She ascended the throne on the 9th July, 1762. In her government the spirit of Peter the Great appeared to have revived. Among her earliest acts, was a confirmation of the peace which Peter III. had

[15] Catherine I. was a woman, in many respects scarcely less extraordinary than her husband and predecessor. She was born at Ringen, a small Livonian village, and was the natural daughter of a country girl. The time of her birth is not exactly known. The greater number place it in 1687; though some assert that she was born in 1689. She was originally called Martha, but assumed that of Catherine when she embraced the Greek religion. The proprietor of the village in which she was born, was count Rozen, a lieutenant-colonel in the Swedish service. The count took young Catherine and her mother under his protection; a circumstance which has induced many to believe that he was her father. By the death of the count, and of her mother, when she was only three years of age, Catherine was left completely destitute. The clerk of the parish took her into his house, and Gluck, a clergyman at Marienburg, pitying the orphan, received her into his family, and educated her with his own daughter. Catherine, now 17 years of age, displayed an uncommon share of beauty. About this period a young Swedish dragoon saw her, and obtained her consent to their marriage; but it appears, however, to be indisputable, that her husband, if he ever actually became so, did not remain with her more than eight days, being hurried away to distant service. Catherine, it is said, never afterwards saw him. Marienburg was soon afterwards taken, and General Bauer found Catherine among the prisoners. She was taken into the General's house, and soon became his favourite.—From Bauer's family she passed into that of Menzikof, the favourite minister of Peter I. In this situation she soon attracted the notice of the emperor, and so completely charmed him, that, in May, 1711, he privately espoused her; and, in February, 1712, with much solemnity, publicly celebrated their nuptials. Her power over Peter was unbounded. She was his constant companion in every expedition; and her counsel was never resisted. It must be mentioned to her honour, that this power was never abused. She was the constant friend of the unfortunate, and in every advice, she consulted the true interest of him to whom she owed so much.

made with Prussia; but she recalled her troops, and preserved a strict neutrality until the end of the war. She also re-established friendly relations with Denmark; and even caused her son Paul to exchange with that kingdom his hereditary possession in Holstein, for Oldenburg and Delmenhorst, and subsequently to renounce his interest in these countries in favour of the younger line of Gottorp, then reigning in Lubec. The interior of her empire was meanwhile greatly benefitted by the presence of the foreign colonists, whom she had invited thither to support and improve the agricultural industry of her subjects. Indeed the whole reign of this empress was marked by the successful encouragement given to civilization, sciences, arts, navigation, and military education. She founded new towns; concluded commercial treaties; divided her empire into governments, and revised and augmented the national laws, of which she planned and executed a code. At two several times she reduced the public taxation. But her politics pressed heavily on other countries. Poland was already, since 1764, under her control. She thought it prudent to attach to her interests, a powerful party in this quarter, and accordingly took the Dissidents, or Non-Catholics, under her protection, and obtained for them the restoration of their ancient rights, under Stanislaus Augustus Poniatofski, whom her own influence had placed on the throne of Poland. On the other hand, the confederation of Bar opposed the Russian influence in this quarter; and the Porte, at the instigation of France, united with the confederation. A war with the Turks ensued, which lasted from 1768 to 1774; and during which the weakness of the Mahommedan power became more apparent. After a series of battles, Bender and the Crimea were subjected to Russian domination; Azof occupied; and a new maritime power established upon the Black Sea. The jealousy evinced by Prussia and Austria towards the progress of the Russian arms against the Turks, was appeased by the first partition of Poland in 1772, in which Russia obtained for her share the lands between the Dnieper, the Duna, and the Drutsch. A rebellion of the Cossacks of the Don, towards the end of the year 1773 was quelled the succeeding year, and their Ataman carried to Moscow, and there beheaded. The war with Turkey was at last put an end to by the peace of Kutschuk Kaitnardage, on the 21st July, 1774, by which the Crimea was pronounced free; and the lands extending between the Dnieper and Azof declared to belong to Russia, with the right of free navigation on the Black Sea. Frederick II. who had recognized in Russia, during the seven years' war, his most dangerous neighbour, concluded an eight years' alliance with Catherine in 1764, which was subsequently renewed by a treaty, in which he virtually gave Poland up to the Russian power, by consenting to the continuance of the anarchical government of that kingdom. In consequence of this alliance with Prussia, Catherine promised to support Frederick with 60,000 men in the Bavarian war of succession; whereupon Austria, on the 13th May, 1779, consented to the peace of Teschen, as guaranteed by the Russian empress. But shortly before Frederick's death, Joseph II. reached the object of his ambition. In 1780, Catherine declined to renew the then expiring treaty with Prussia, but entered on the other hand into a close alliance with Austria. Catherine early perceived that the efforts of England were steadily directed at nothing less than universal dominion by sea. To counteract this design, she founded, during the North American war, the Northern Neutrality in 1780, which was joined by several other States of the continent, as

Prussia and Portugal. The cession of Kuban and the Island of Taman, by the Khan of Tartary, to the Russian crown in 1783, was a severe blow to Turkey. These countries were united to Russia, under the denomination of the kingdom of Taurida, and the Porte was further compelled, by treaty of 8th January, 1784, to recognize the attachment of the Crimea to the Russian empire. The prince Heraclius of Georgia had previously submitted to the Russian power in September, 1783. All these arrangements imbittered the feelings of the Porte towards Russia, particularly after the interview of Joseph II. and Catherine, at Cherson, in 1787, when the Grecian scheme, as it was called, or the expulsion of the Turks from Europe, seemed about to be carried into effect. At last, on the 24th August, 1787, the Porte declared war against Russia. In this war Austria took part as an ally of Russia, although the Turks entertained no designs against that power. By the mediation of Prussia and England, a cessation of war took place in 1790. These powers had guaranteed to Turkey the security of its dominions; and, to enforce their representations, a Prussian army marched upon the Austrian limits. On the death of Joseph, Leopold II. felt himself compelled by the negotiations of Reichenbach to conclude a peace with the Turks at Szistowa in 1791; but Catherine steadily rejected Prussian and English mediation, and two years after the storming of Ismael by Suvarof, on the 22d December, 1790, concluded a treaty on her own terms, by which Russia obtained Oczakof, and the lands between the Bog and the Dniester. During this war Russia had also sustained a war with Sweden, from 1788 to 1790, which was terminated by the peace of Verelä, and subsequently followed by an alliance with Sweden. On the conclusion of the Turkish war, Catherine again turned her eyes upon Poland, whither she marched the returning army to support the league of Targovitz, formed under her protection against the constitution of 3d May, 1791, with the design of checking the new plan for ameliorating the political constitution of that country. The Russian dictatorship in Poland re-established the ancient constitution; and on the occasion of the second partition, in 1793, the greater part of the palatinates of Wilna, Novogrodek, Brzesc, Kief, Volhynia, and Podolia—a territory of 86,800 square miles, was added to the Russian empire. On the remaining part of Poland she imposed the most grievous restrictions; but the exasperated spirit of the Poles could no longer brook these insults, and burst forth in a formidable rebellion at Warsaw, on the 17th April, 1794. A heroic struggle now commenced under Kosciusko against two powerful States for the re-establishment of the ancient independence of his country; but that gallant chief was overwhelmed by numbers and taken prisoner, while Suvarof stormed and devastated with more than barbarian fury the suburbs of the Polish capital. Warsaw itself made a capitulation, and the hour of the entire dissolution of one of the most ancient kingdoms of Europe rapidly approached. In the third partition of Poland in 1795, Russia extended her power towards the west as far as the Vistula, and added to its already gigantic dominion the remainder of Volhynia, Brzesc, Novogrodek, Samogitia, and a part of Troki. Stanislaus signed at Grodno, whither he had been summoned by Catherine, the abdication of his dignity and the dissolution of the ancient kingdom of Poland, on the 25th November, 1795. Compared with these acquisitions, the incorporation of the dutchy of Courland with the Russian empire in 1795 could be called but a small aggrandizement: but the Russian State, by this latter seizure, squared its

dominions. It now extended itself from the shores of the Baltic, in an enormous line to the western end of North America and the Japan Islands. Catherine did not see it prudent to take any other part in the war of the French revolution—by which no sensible advantage could be gained for Russia—than by issuing a thundering manifesto, and equipping a fleet which remained inactive. Shortly before her death, which took place on the 17th November, 1796, she conducted a successful war against Persia, which was terminated by her son and successor, Paul I. by the peace of Teflis in 1797, in which he gained, by a new line of boundary between Persia and Russia at the River Kur, the fortress of Derbent and the town of Baku. The administration of Catherine was successful in the extreme, and her reign one of the most fortunate that we meet with in Russian history. Conducting the affairs of a vast but semi-barbarous empire, through a very critical period in the history of European politics, she left it to her successor with an annual revenue increased from thirty millions of rubles to sixty; an aggrandizement of territory amounting to nearly 240,000 square miles; an army of 450,000 men; and a navy of forty-five ships of the line.

The annals of eastern despotism do not exhibit the history of a more capricious monarch than Paul of Russia. Every whim and weakness seem to have entered into his character. His long-repressed dislike of his mother quickly evinced itself in the changes which he made on her institutions: changes which it may well be supposed were seldom for the better. The chief of the secret police became the next influential man in the empire to the autocrat himself, who, though he seemed to have some perception of justice, was ever guided by his own blind passion, and pursued his own will with the most reckless and persevering obstinacy. Among other fancies, Paul was pleased to issue an edict ordering every person to bend the knee before him when he went abroad; round hats, long pantaloons, and short waistcoats were the special objects of imperial antipathy; and the slightest offence against existing regulations in such trifles was punished in the most cruel manner. The same insane spirit was evinced in his recalling all his subjects from abroad, and closing his empire in 1798 to all foreigners. On the occasion of his coronation at Moscow on the 16th April, 1797, he altered the law of succession established by Peter the Great, in such a manner as secured it in the first place to the male line according to primogeniture, and only failing it, to the female line, but with constant preference to male issue. Irritated by the conduct of the French Directory, he received in October 1797, not only the corps of emigrants under Condé in Volhynia, and the French Pretender at Mittau, but even entered with Austria and England into a second coalition against the French in 1798, and accepted, with marks of great satisfaction, the decoration of a Maltese grand cross. Special alliances were concluded with Naples, the Porte, and Portugal, and war declared against Spain then allied with France. A Russian fleet sailed in concert with a Turkish one from the Black Sea into the Mediterranean, and reduced the Ionian Islands, which were thereupon recognized as a republic by the two most absolute sovereigns in Europe, the Autocrat of Russia and the Sublime Sultan, and placed under the protection of the latter! The armies which Paul sent against France were commanded by Suvarof in Italy, and Korsakof in Swabia. The eclat with which Suvarof entered Italy was overcast as soon as he had measured strength with the already weakened French army under Moreau's command. The

dearly won victory at Novi on the 15th August, 1799, was succeeded by a series of skirmishes with the French, which ultimately transferred the theatre of war to Switzerland, where Korsakof, before Suvarof could effect a junction with him, sustained an important defeat from Massena at Zurich; and in the meantime, Brune forced, after a few weeks' fighting, the Russians—who had landed in concert with the English on the soil of the Batavian republic—to quit the Netherlands in October, 1799, after being defeated several times. In the succeeding winter, the remains of the Russian army returned home in four columns. The defeat of his arms, the taking possession of Malta by the English, and the bad understanding which subsisted between his generals and those of Austria, had a great effect on the emperor's mind, while the powerful hand with which Bonaparte, on his return from Egypt, swayed the consular dignity, filled him with admiration. Alarmed by the proceedings of the English government, he laid an embargo on their vessels on the 29th of August, 1800; and in November following became the leader of the Northern Neutrality, which at his invitation was joined by Sweden, Denmark, and Prussia. The coldness which he had evinced towards the latter power on account of its declining to join in the coalition against France, now gave way; and the ancient alliance between the two States was renewed in September, 1800. Paul had now entered into direct correspondence with the First Consul; 7000 Russian prisoners had been returned from Paris without ransom, and the treaty of Luneville just concluded, when he was assassinated on the night of the 23d March, 1801, at the moment when the British fleet were sailing through the Sound to break the Northern League. The harshness with which Paul treated his nobles excited this conspiracy, in which his own sons joined, being persuaded that their father was intending to clap them into a fortress. Prince Alexander is said to have stipulated with the conspirators that his father's life should not be taken, and that on his returning to sanity he should be again reinstated in the office and dignity of emperor. The principal conspirators were three of the Subof family, and the generals Bennigsen, Ouvarof, and Pahlen. They entered the royal apartments about eleven o'clock in the evening of the 23d March, despatched the sentinel, passed into Paul's bed-room, and on meeting with resistance from the emperor, who tried to defend himself with a sword, threw him to the ground, and strangled him with a sash.[16]

[16] Dr. Lyall, an excellent authority, has thus described this remarkable assassination, and the circumstances by which it was attended:—Agreeably to a revelation made to him in a dream, or in a vision, Paul had built the palace of St. Michael; an immense quadrangular pile at the bottom of the summer-gardens, moated round, and fortified with bastions of granite; and there, as in a fortified castle, and secure from danger, the Emperor, with his family, took up his residence. His Majesty, however, seems to have had some presentiment of his approaching fate; and had even ordered a secret staircase to be constructed, which led from his own chambers to the terrace; but, in the hour of danger, he was unable to take advantage of this exit. Late on the evening of the 11th, or early on the morning of the 12th of March, 1801, (O. S.) Paul was assailed by a band of conspirators; and, after unavailing threats, succeeded by entreaties and promises, and a noble resistance, his Majesty was strangled by means of a sash, one end of which was held by Zubof, while a young Hanoverian drew the other, till their victim expired. As if they had been attending a banquet, the assassins retired from the palace without the least molestation, and returned to their respective homes. Medical aid was called, in the hope of restoring suspended animation, but Paul had paid the debt of nature, and a few days afterwards his body was embalmed by Sir James Wylie, one of the lucky individuals whose fortune was made by his Imperial Master's whims. It almost seems an anomaly in history, that the murderers of Peter III. became the avowed favourites or the *protégés* of Catherine II.; and it is scarcely less remarkable, that the mercy of Alexander was extended to the assassins of his father.

Alexander I., Paul's eldest son,[17] on the eventful morning of the 24th March, 1801, accepted of the reins of government, which he pledged himself to conduct in the spirit of his grandmother Catherine. For a while, the colossal empire seemed to enjoy deep tranquillity; the secret police disappeared in April, 1801, and the oppression of the governor-generals ceased to be felt in the remote provinces. The senate and the cabinet were re-organized; and the influence of the senate over the affairs of the empire was re-established on the 20th September, 1802. Intercourse with foreign countries was again permitted, and a minister for popular education was appointed. New universities, on the plan of the German

Zubof, the chief conspirator, and the more active of the murderous band, was ordered not to approach the Imperial residence, and Count Pahlen, the former Governor of that city, was transferred to Riga; the other conspirators were treated as if no blame attached to their characters. It is difficult to penetrate the secrets of courts; the real motives of their actions are seldom revealed to the world. It is therefore impossible to conceive why Alexander withheld that vengeance which justice seemed to demand from the heads of his father's assassins. It has been attributed, by one of his panegyrists, to a forlorn and melancholy conviction that the murderers had been prompted to commit the bloody deed solely by a regard to the salvation of the empire. Such a conviction might have induced the young monarch to diminish the weight of that punishment which piety and justice called on him to inflict, but can scarcely account for his total forbearance. Disgusted, oppressed, and rendered miserable by the shocking misrule, the excessive caprice, and the extreme severity of Paul, the nobles entered into a conspiracy, and determined to rid themselves and their country of a tyrant; and they calmly effected their purpose. They next offered the crown to the Grand Duke, Alexander, and the true heir to it; and they probably threw out an insinuation, that if he did not accept of their offer, another branch of the imperial family would be raised to the throne, or even a new dynasty commenced. Under such circumstances, no choice may be said to have been left for Alexander; he accepted the crown from the murderers of his father, who, at that period, were among the most influential men at Petersburg, and in Russia; and who might as easily have hurled him from his elevation, as raised him to it. Therefore, the Emperor, by necessity and policy, could not act otherwise than with moderation towards the assassins of Paul, not only on becoming Autocrat, but even after he had consolidated his power. A despot is fearful of offending his powerful nobles, unless they have made themselves obnoxious to some individuals of still greater power, who would rejoice at their ruin. Thus, Paul's murder was the result of despotism, and Alexander's clemency emanated from the same cause.

[17] The Emperor Paul and Empress Maria had four sons, Alexander, Constantine, Nicholas, and Michael; and five daughters, Alexandria, Helena, Maria, Catherine, and Anna.—Alexander Paulovitch, the late Emperor, eldest son of the Emperor Paul, was born 23d December, 1777, and married 9th October, 1793, to Maria Louisa Elizabeth Alexiofna, of Baden, the present Empress Dowager, who was born on the 4th January, 1779. Of this marriage the only issue was a Princess (Maria) born 29th May, 1797, who died young.—Constantine Paulovitz, second son of the Emperor Paul, was born 8th May, 1779, and married 26th February, 1796, to Anna Feodorofna Julia Henrietta Ulrica, of Saxe Coburg, who was born 23d September, 1781. This marriage, of which there was no issue, was dissolved in April, 1820, and Constantine was married 21th May, 1820, to Jane Gruzynska, a Polish lady, created Princess of Lovicz. Of this marriage there is as yet no issue.—Nicholas Paulovitch, third son of the Emperor Paul, was born 6th July, 17'6, and married 13th July, 1817, the Grand Dutchess Alexandria Feodorofna Louisa Charlotte Wilhelmina of Prussia, who was born 13th July, 1781. The issue of this marriage are Alexander Nicolaovitch, born 29th April, 1818; Mary, born 3d August, 1819; Olga, born 11th September, 1822.—Michael Paulovitch, fourth son of the Emperor Paul, was born 8th February, 1798.—Alexandria Paulofna, eldest daughter of the Emperor Paul, was born 8th August, 1783, and affianced 3d March, 1797, to Joseph Anthony, brother to Francis II., Emperor of Austria. She is since dead.—Helena Paulofna, second daughter of the Emperor Paul, was born 13th June, 1778, and married the 19th May, 1799, to Frederick Louis, hereditary Prince of Mecklenburg-Schwerin. She is also dead.—Maria Paulofna, third daughter of the Emperor Paul, was born 15th February, 1786, and married 3d August, 1804, to Charles Frederick, hereditary Prince of Sachsen Weimar, by whom she has issue Charles Alexander Augustus John, Prince of Sachsen Weimar, born 24th June, 1818.—Catherina Paulofna, fourth daughter of the Emperor Paul, was born 21st May, 1788. She is now dead.—Anna Paulofna, youngest daughter of the Emperor Paul, was born 18th January, 1795, and married 21st February, 1816, to William Frederick, Prince of Orange, by whom she has issue three sons.

seminaries, were founded at Dorpat, Kasan, and Charcof; the universities of Wilna, and the Academy of Sciences at St. Petersburg, founded by Peter I. were re-organized; considerable sums were set apart for the improvement of the schools, and of education in general throughout the empire; and the restraints which had been laid on the press were relaxed by a milder edict of censorship. In 1803 a new division of the empire into governments took place, and the institutions of Catherine II. were, to a considerable extent, re-established. The situation of the slaves of the soil underwent considerable amelioration; in particular, the peasants of the crown were allowed to possess a piece of landed property, and the nobles were invested with full power to grant their slaves freedom. By these measures, the class of free peasants was founded. The commerce of the empire was also considerably increased and promoted by the foundation of the town and port of Odessa. Even the government of the Cossacks, and the laws relating to Jews underwent review; and Krusenstein was sent, at the national expense, on the first Russian expedition round the world. The spirit of Alexander's government not only showed itself in the internal administration of the empire, but the system of Catherine II. was adopted in its foreign policy. Alexander sejoined himself from the Northern League, by concluding a treaty with Great Britain on the 7th June, 1801, and at the same time renounced the dignity of a Grand Mastership of Malta, which had been conferred on his father. He however confirmed the incorporation of the government of Georgia with the Russian empire; and on the 4th and 8th October concluded treaties of peace with Spain and France, and renewed the treaties of commerce of 1787. In conjunction with the First Consul, the Russian Autocrat took the lead at the Diet of Ratisbon in 1802 and 1803, in the important measures of secularization pursued by that congress, in which the courts of Bavaria, Wirtemberg, and Baden, united with Russia by family ties, had a great interest. But the political horizon in the quarter of France was speedily overcast. Dissatisfied on account of the refusal on the part of that government to indemnify the king of Sardinia, the Russian ambassador, Count Markof, left Paris on the 7th November 1803; and after the execution of the Duke D'Enghein, all diplomatic intercourse between Russia and France was interrupted by the departure of the Russian *chargé d'affaires*, Oubril, who left Paris on the 31st August, 1804. On the 11th of April following, Russia joined the third coalition against France. Alexander himself appeared with his army in Moravia, after having by a personal visit at Potsdam reconciled the existing misunderstandings with Prussia, and concluded a treaty with the latter power after a ridiculous display of imperial sentimentality, in which the two monarchs are said to have sworn eternal friendship over the coffin of Frederick II. Having lost the battle of Austerlitz on the 2d December, Alexander returned to Petersburg. Austria concluded peace with France; and in the following summer Oubril again appeared at Paris, and negotiated a treaty of peace with General Clarke. This peace, however, Alexander refused to ratify, on receiving accounts of the Rhenish confederation which had been organized at the same period; and his armies marched to support Prussia in the struggle against Napoleon, which began in the year 1806. The battles of Jena and Auerstadt had decided the fate of this war before the Russians arrived; it was, however, continued in Poland and Eastern Prussia. The battle of Eylau, fought on the 8th of February 1807, gave no decisive advantage to either party;

that of Friedland, on the 14th June following, decided the war in favour of Napoleon. The Russians retired upon their limits; and after an interview which took place upon the Niemen and at Tilsit, between the two emperors, the peace of Tilsit was concluded on the 8th July, 1807. By this peace Russia gained—at the expense of her late dear friend and ally, for whose sake she had originally engaged in the war—the Prussian department of Bialystock, but left the lordship of Iever to the disposal of France.* Alexander also acknowledged the Rhenish confederation, with all its present and future members, and the two new States—the dutchy of Warsaw and the kingdom of Westphalia. A secret article in this treaty yielded Cataro and the Ionian Islands to France. During the war with France, Alexander had likewise been engaged in war with the Turks. Sultan Selim III. found himself in a dangerous position between France, which had become his neighbour in Dalmatia since the peace of Presburg, and Russia, whose superior power Turkey had been made to feel for the last thirty years of the eighteenth century. When the French government were apprized of the refusal of Alexander to confirm the peace of Aubril, and this circumstance, as well as the preparations of Prussia, prognosticated a new war, the French ambassador at Constantinople, Sebastiani, was ordered to demand from the Porte, that the Bosphorus should be shut to Russian ships of war and transports, and the alliance with England dissolved. The Russian ambassador on his side declared that he would apply for his passport unless the former hospodars of Moldavia and Wallachia, Ipsilanti and Morusi, were re-established in their respective governments. In consequence of these negotiations, Turkey re-instated the two hospodars, and resigned the Ionian republic to Russia. But the leaning of the Porte to the French side was evident: and the Russian army crossed the Dniester in 1806: on the 6th January following the Porte issued its manifesto. Under French mediation at the peace of Tilsit, an armistice was concluded between the two belligerent powers; but as Russia now demanded possession of Moldavia, Wallachia, and Bessarabia, and the dismissal of the English ambassador from Constantinople, the war was renewed in 1809, and lasted with varied fortune till the peace of Bucharest in 1812. The treaty now negotiated fixed the Pruth as the boundary between both empires. In consequence of this arrangement, Wallachia and a part of Moldavia returned to Turkey; but the eastern part of Moldavia, with the fortress of Chotzina, and Bessarabia, with Bender, fell to the lot of Russia. By a later treaty of September, 1817, the new limits were more definitely fixed. During the war with Turkey, English agency excited a war between Persia and Russia; and a brief war was also entered into with Sweden on the occasion of Gustavus IV. having rejected all overtures for a rupture with England. This latter war obtained for Russia the province of Finland, by the peace of Friedrickshamm, 17th September, 1809. By this acquisition Russia gained an additional million of subjects. In 1808, Alexander had an interview with Napoleon at Erfurth, and afterwards took part, as the ally of France, in the war with Austria; for which, although the assistance given was very insignificant, Napoleon, by the peace of Vienna, rewarded his ally with the circle of Tarnopole in Eastern Galicia. The new organization of the Council of State by ukase of 1st January, 1810, was a measure of great importance to the internal administration of the Russian state; but the condition of the finances was poor in the extreme, and paper-money fell prodi-

giously. Under these difficulties, it could hardly have been anticipated that the war with France would be renewed in 1812. But the good understanding betwixt Alexander and Napoleon, had grown somewhat cold, since the seizure of the dutchy of Warsaw; and still more so when Napoleon, extending the French empire to the shores of the Baltic, incorporated the dutchy of Oldenburg with his empire. A Russian ukase set severe restrictions on French commerce; and, after long and fruitless negotiations, war was declared on the 22d June, 1812. While Napoleon concluded an alliance with Austria and Prussia, Russia entered into a secret treaty with Sweden, on the 24th March, 1812; concluded, on the 8th July following, a treaty with Great Britain; entered into an alliance with the regency of Spain on the 20th of the same month; and previously negotiated a treaty with the Turks, at Bucharest. The French army victoriously advanced to the Moskva, on the banks of which river they again defeated the Russians in a tremendous engagement, on the 7th of September, and entered Moscow, the Russians retiring before them and setting the city on fire. Napoleon lingered too long in this northern latitude at the season of the year. A more than usually rigorous winter, and the want of provisions, nearly annihilated the splendid army with which he had crossed the Niemen. Prussia, the whole of Germany, and at last even Austria, now united with Russia against France, while England concluded a treaty of subsidy with Russia, on the 15th June, 1813, in which the former power undertook to pay the Russian German Legion. The mediation of England likewise negotiated a peace between Russia and Persia, by which the former obtained the Khanates of Karabag, and Garischa (Elisabethpol), Schekin, Schirvan, Derbent, Kubin, Bakin, and the district of Talish; besides the whole of Daghestan, and Grusia, with the province of Schuragel, and the districts of Imiretia and Guria, with all the regions lying between these new frontiers and the Russian Caucasian line, and the districts uniting that line and the Caspian Sea: on which sea Russia also obtained the exclusive right of maintaining ships of war. The battle of Leipsic decided the retreat of the French across the Rhine, whither the allied armies followed them; and, after a series of battles, entered Paris on the 31st March. The intermediate details of this portion of European history will be with more propriety given in another place. By the Congress of Vienna, Alexander obtained the incorporation of the kingdom of Poland with the Russian empire; and, on the other hand, he relinquished to Austria the circle of Tarnapole, in Eastern Galicia, which he had, in 1809, acquired by the mediation of Napoleon. The return of Napoleon from Elba again called the allied armies into the field; and, after the battle of Waterloo, Alexander entered Paris, for the second time, on the 11th of July, 1815, where, on the 6th September following, he founded the Holy Alliance, which was successively joined by all the continental powers of Europe, with the exception of the Pope and Turkey. Happily for the liberties of mankind, Great Britain refused to join in this Holy Alliance, which has since proved itself, by its acts, one of the most infamous leagues which was ever formed against the rights of nations and the progress of the human mind. At the Congress of Aix-la-Chapelle, in 1818, Troppau and Laybach, in 1820 and 1821, and Verona, in 1822, Russia maintained its commanding influence over European politics. In North America some new establishments were founded, and the maritime boundaries of Russian America fixed by ukase of 16th September, 1821. But in consequence of the

remonstrances of the British and American governments, these boundaries were anew adjusted. On the 25th of March, 1820, the Jesuits were banished from Russia and Poland; and another order, of the 12th August, 1822, abolished the ancient and numerous fraternity of Free Masons. However great were the political advantages which presented themselves to Russia in the rebellion of the Greeks against the Turks, in Moldavia, Wallachia, and the Morea, Alexander pronounced his decided disapprobation of that movement, in the Congress of Laybach. The rebellions in Spain, Naples, and Piedmont, likewise drew from the autocrat the most vigorous expression of disapprobation. Alexander died suddenly at Taganrok, on the 1st December, 1825, while making preparations for a grand review of his army in that quarter of his vast dominions. His brother, the Grand Duke Nicholas, born on the 25th June, or, according to our style, 6th July, 1796, being in Petersburg when the news arrived of Alexander's death, caused his elder brother, Constantine, then in Warsaw, to be proclaimed emperor, and took the oaths of allegiance to him, with the senate, dignitaries, and soldiers of the empire. This, however, appears to have been nothing more than a piece of political acting. Constantine had in fact executed a deed of renunciation of his right of primogeniture, in the beginning of 1822; and accordingly, on the production of that deed, and the late Emperor's ratification, duplicates of which had been deposited in the hands of the Senate and Holy Synod, the Grand Duke Nicholas, as next heir to the crown, ascended the throne.

Poland.] Poland having disappeared from the list of independent European states, and the greater part of that ancient kingdom having been absorbed by Russia, we find ourselves compelled, notwithstanding the length of the preceding historical remarks, here to advert briefly to the history of Poland before its dismemberment.

This country has been for above one thousand years remarkable in history only for its misfortunes. It occupies the largest plain in Europe,[18] extending from the Baltic to the shores of the Euxine; and, including Lithuania, possessed, previous to the first partition, in 1772, a territorial extent of above 400,000 square miles, upon which eleven millions and a half of men[19] enjoyed, under 100,000 petty rulers, as little part in the freedom of their republic as in the fertility of their soil. Corn, flax, wood, honey, and wax, noble horses, enormous herds, and great quantities of mineral salt, formed the natural and commercial riches of this country, whose streams, abounding in fish, flowed into the Baltic and the Black Sea. Industry there was none, and could be none, where a handful of men assumed so many privileges and immunities—except in Warsaw, and a few towns where the population were less dependant on tyrannical lords. This nation, a branch of the Sarmates or the Borystenes, received, in the great irruption of the Goths and Huns, and still more in two hundred years' struggle against the Germans, and their own domestic factions, a character singularly composed of passive and active features,—the submission of the slave, and the pride of the noble,—the most abject sentiments and patriotic feelings. In the early ages of this country's history, Silesia belonged to it. Poland made slow progress towards cultivation. About the middle of the 6th century, the name of the first Polish prince, Lech, who

[18] *Poland*, or *Polska*, signifies a plain. [19] Busching says only 8,000,000.

governed at Gnesen, appears in history. After various revolutions, Piast, a poor but virtuous native, was by a wonderful providence elected Duke of Poland, over which his family reigned as hereditary monarchs till 1370, and in Silesia till 1675, when the line of Piast was extinguished with the last Duke of Leignitz. Christianity was introduced into Poland in 962, by the marriage of Mieceslav with a daughter of the Duke of Bohemia. Boleslav assumed the royal title in 1025. The third prince of that name, with the consent of the grandees, divided the country among his four sons, in 1138; after this division, Silesia and Poland were not again united. The Mongolian invasion, in 1240, was indeed destructive here as elsewhere, but had no permanent influence on the Polish constitution. King Casimir the Great gave to his kingdom a new constitution and code of laws. The extinction of the line of Piast in this generous monarch was a severe misfortune for his country. His sister's son, King Louis of Hungary, only succeeded to the Polish throne by granting extensive privileges to the native nobility. After his death, Poland and Hungary were again separated, and his younger daughter, Hedwig, elected Queen of Poland. Hedwig married the Grand Duke of Lithuania, Jagellon, who was admitted to the throne on promising to acknowledge the right of election vested in the States. Jagellon took the name of Vladislav, embraced the Christian religion, and became the founder of the line of Jagellon, which reigned here till 1572. After the extinction of this dynasty, a period of aristocratical anarchy prevailed, under kings of different houses, until Frederick Augustus of Saxony was elevated to the throne. We pass over the history of this kingdom until the abdication of the Polish crown, after a stormy reign, by John Casimir, on the 16th September, 1668. He was succeeded by Michael Wisnеowiezki, remarkable only on account of his great general John Sobieski opening by his talents and virtues a way to the throne, which he ascended after Michael's death, in 1674. He reigned till 1696, under the title of John III. This prince's reign was distinguished by victorious and warlike deeds; but though he was one of the first generals of his age, and shewed also, as Regent, no inconsiderable talents, his best plans were checked by the ill-balanced constitution of Poland. Two electors of Saxony, Augustus II. and Augustus III., successively followed him. But between these, the influence of Charles XII. raised the Waivode of Posen, Stanislaus Lesczinsky, to the throne. That prince, however, could only maintain himself on the throne by the protection of the Swedish monarch; and after the unfortunate battle of Pultava, in 1709, Augustus II. resumed the government of Poland, under the protection of Russia. Augustus III. succeeded in 1733; and on his death, Stanislaus Augustus Poniatofsky was elevated to the throne by Catherine of Russia's influence. This prince was destined for an unhappy lot. The elegance of his mental accomplishments could not make up for the weakness of his character; he became the mere political tool of his mighty neighbour, and in the evening of his life beheld his kingdom dissolved by a triple partition among her enemies. He died on the 12th of February, 1798, at Petersburg.

CHAP. II.—PHYSICAL GEOGRAPHY.

EUROPEAN RUSSIA is for the greater part a champaign country, scarcely possessing in its interior a single range of mountains. In the extreme north-west, the Scandinavian Mountains rear their lofty heads; on the eastern limits, the Uralian chain; on the south-west, the Carpathian Mountains; and upon the southern peninsula the Mountains of Taurida. Many large inland lakes are found in the northern parts; and, in the south, vast steppes. Northwards, the country flattens towards the White Sea, and southwards to the Black Sea.

Mountains.] With the exception of the Uralian chain, the mountains running through, or bordering upon Russia, are only advanced portions of ranges belonging to other countries.

Uralian Mountains.] The mountains of Ural, called by the Russians "the girdle of the world," form in one part the natural boundaries between Europe and Asia. Their whole length extends to about 1200 miles; but the northern part alone, from the Petschora to the Karian Gulf, belongs, with its western side, to European Russia. This chain rises in the Island of Nova Zembla, in a high rocky mountain, whence it runs across the Straits of Vaigatz, where it forms the island of that name, to the continent; cutting the north-east corner of Archangel, it forms, to the sources of the Petschora, the boundaries between that government and those of Vologda and Tobolsk. The continuation of this chain lies wholly within Asiatic Russia. In Nova Zembla, the extremity of this range is a bare limestone rock, without any covering except a few patches of moss, and for the greater part of the year buried under ice and snow. On the Island of Vaigatz, the range appears in a low and barren ridge of rocks. It rises out of the Karian Gulf in three branches, which unite at the sources of the Petschora, and of which the middle ridge is the highest. Here also it is mere barren rocks; a few patches of stunted wood begin to appear, but wood is not found to any extent till we reach the sources of the Petschora. A few inferior limestone ridges, full of ravines and grottos, diverge into the governments of Archangel and Vologda.

Finnic Mountains.] The Russian Finnic Mountains, a continuation of the Scandinavian chain, or the Kiöles, bear the name of *Maanselkä*, or "Division of the Land," and form the boundaries between Norway and Russia. They run, between the Baltic and White Sea, through the isthmus which connects Scandinavia and Russia, to the most extreme north; flatten at Petersburg, Novogorod, and Vologda; reach in the west to the Gulf of Finland, and cover a space of about fifteen degrees. The principal heights consist of granite, trapp, hornslate, and scaly limestone. In the Arctic district, this range is partly spotted with stunted vegetation; in the Cold district it is covered with pines and other trees. In some places it is open and susceptible of culture. In the lower regions, there are enormous blocks of granite; and towards the White Sea numerous fragments of rock lie scattered over the country. These mountains contain copper, iron in great quantity, marble, granite, and Labrador spar. The rivers are not considerable; but form several large lakes. Notwithstanding their moderate height—the highest tops being scarcely 600 feet above the level of the sea—many of them are perpetually covered with ice and snow. One of the principal branches of these hills

is the ridge of Skemonskiya, which terminates in a peninsula stretching between the White Sea and the Gulf of Tcheskaja.

Alaunian Mountains.] The Alaunian chain, or the Forest of Volchofski—the *Alaunus Mons* of Ptolemy—consists of a series of gentle elevations running N. E. and S. W. through the provinces of Moskva, Tver, Petersburg, Smolensk, and Tula, and forming the highest district in the Russian champaign country. The rivers Volga, Dnieper, Don, Oka, and Volkhof, have their sources in this chain. It is rich in iron, vitriol, alum, gypsum, lime, and coal. The surface is woody. Several ridges run off in almost imperceptible elevations; the principal of which are the Mountains of Valdai in Twer and Novogorod, and around the lakes of Valdai and Ilmen. This chain rises to 1250 feet above the level of the sea, and is covered with trees, chiefly pine, fir, birch, linden, aspen, and alder. The Mountains of Duderhof run from Szelon to Oranienbaum, on the Gulf of Finland. Tver is also a floetz range, and does not exceed the elevation of the Valdai.

The Carpathian Chain.] The Carpathian, or more strictly speaking, the advanced mountains of this chain, spread out partly in the southwest of Poland, and partly through Podolia. In Russian Moldavia they flatten entirely; they are rich in iron, saltpetre, and sulphur.

Taurian Chain.] The Mountains of Taurida are a continuation of the Caucasus. They rise from the plains of the peninsula to elevations of moderate height, which run in front of the Black Sea and sink into it on the west and south. They exhibit limestone mixed with shells, sandstone, and marl floetz. Their mineralogical treasures have not yet been fully explored. They are said to contain lead, copper, and iron, but at present they only furnish marble, slate, sandstone, coal, and lime. At their foot is found salt and naphtha. Among the thousand streams which take their rise here, we may enumerate the Karasu and Salgir. The water of these streams is intensely cold, and so transparent that a small object may be easily observed at the depth of several fathoms. The highest tops are the Tschaturdag—the *Trapezus* of Strabo—so called, because its shape is not unlike a tent;[20] and the Tomdschir, the former of which is said to exceed 6800 feet in perpendicular height, and rises so rapidly from the coast, that its apparent elevation is much greater. The traveller takes three hours to ascend it, but has a noble view from the top of the whole peninsula. All the higher parts of the Tschaturdag exhibit a mass of very compact grey limestone. Its lower district is covered with thick groves. On the Island of Tmutarakan a volcano appeared in 1793, but it then emitted only ashes and stones, and is now quiet. In most of these calcareous hills, there are caverns filled with snow, and some remarkable grottos. Upon the Tschaturdag there is an ice cavern, fourteen feet in depth, which even in the month of June contains ice.

Forests.] No empire on earth has so much wood as Russia. Whole provinces are covered with an uninterrupted forest, from which all Europe might draw its naval supplies for many years, although in some places the most inconsiderate waste of timber has been allowed. Thus, in the government of Moskva, notwithstanding its immense forests, a general

[20] "With what different views," remarks a female traveller, (Mrs. Holdenesse,) "has this singularly shaped mountain been viewed by different nations, and how plainly have they betokened their several habits in the names which they have chosen to affix to it. The Greeks called it Table Mountain; the Tartars, Tent Mountain; the Cossacks, Saddle Mountain; but an Englishman at Seventopol, told a friend of mine, that he considered it as resembling nothing so much as a sirloin of beef!"

deficiency of wood for the purposes of home-consumption is felt; and in the provinces of the Baltic, exportation has almost annihilated the rich forests. The southern governments are entirely destitute of wood for fuel; and in the neighbourhood of the Karymisch, peats are employed. The thickest woods are in the governments of Olonetz, Vladimir, Smolensk, Vologda, and the southern parts of Archangel. The forest of Volchofski, is one of the largest in Europe. Poland has enough of wood for its own consumption.

Plains and Steppes.] The Russian empire abounds in those extensive level plains called *Steppes*, sometimes resembling deserts, at other times savannahs waving with luxuriant grass.

The Petschorian steppes belong to the Arctic plains, and spread out between the Düna and the Petschora, or from the Polar Sea to the government of Vologda. They present a surface of the greatest uniformity, forming an extensive marsh sprinkled with a little brushwood, and here and there a patch of rocky soil, or peat ground, entirely uninhabited and interspersed with numerous small lakes.

The steppe of Jaroslav, between Koslov and Chopersk, is, properly speaking, two distinct plains, in the midst of which lies Tambof. It is entirely destitute of wood, and only fit for pasture.

The steppes of the Don, in the country of the Don Cossacks, extend between the Moderaditza, the Choper, and the Ilavla. The surface of these steppes consists of clay and sand, a few patches of marsh, and some spots of timber. They afford extensive pastures, and are watered by a few slowly running brooks.

The steppe of Kuban, in the country of the Tschernomoski Cossacks, is a barren district of pasture land, lying upon a strata of limestone and sandstone. The level of this steppe is exactly the same with that of the ocean at 189 British miles west of the Caspian, and 334 feet higher than that of the latter, thus leaving an immense basin from which the waters are supposed to have retired by some subterraneous percolation. This extensive level is extremely arid, totally destitute of wood and water, very thinly inhabited, and contains several salt lakes and plots.

The steppes of Azof extend, on both sides of the Lower Manitsch, to the Sea of Azof and the Lower Don; the soil is thin and dry, and intermixed with salt plots.

The Nogai-Taurian steppes reach from the Lower Don to the Lower Dnieper, along the Sea of Azof and the Black Sea. The soil is clayey, meagre, sprinkled with salt marshes, and destitute of wood. The low countries are rich in grass.

The Taurian plains, in the neighbourhood of the mountains, consist of a limy sterile soil; further downwards they are clayey and fertile; but resume their sterility as they approach the sea. In some districts there are springs of sulphur, which infect the atmosphere to a considerable distance. Liquid asphalta is likewise dug here.

The steppe of Oczakof consists of two different parts; the lower towards the sea is impregnated with iron, and produces only a few rusty coloured shrubs and plants; the higher is more favourable to agriculture, but has many low marshy regions.

The Budshak, or steppes of Bessarabia, are entirely like that of Oczakof, and wholly destitute of wood. The lakes or stagnant water are covered with reeds, and between the marshes, the ox, the buffalo, and

the bison wander among verdant pasture, where the herbage reaches to the height of their horns.

Seas and Rivers.] No country is so well supplied with navigable rivers as Russia; and few empires have such an advantageous internal navigation. The seas by which it is washed have been united by nature and art in such a manner, that one might now set out from Petersburg, or the Baltic, and navigate uninterruptedly either into the Icy Ocean, or the Caspian, or Black Sea. We might even travel from Petersburg to Selenginsk in Siberia, a distance of 6225 versts,[21] or 4124 miles, entirely upon water, with the interruption of a few versts.

The Northern Ocean.] The Northern Ocean, or Icy Sea, washes the government of Archangel, forming upon these coasts several great bays and gulfs, viz. 1*st*, The White Sea at the mouth of the Düna, containing four considerable basins, viz.: the gulfs of Mezen, Dvinskaja, Onegskaja, and Kandalaskaja, and several small islands—as Kamenœ and Solovezkœ-ostrov. Its depth is sufficient for vessels of war. 2*d*, The Tscheskaja basin between the peninsula of Kaninos, which forms the western limit of the White Sea and the continent. Before it lies the Island of Kalgujef. 3*d*, The Karian Gulf, between the island of Nova Zembla and the governments of Archangel and Tobolsk; at the entrance of which lies the Island of Vaigatz. The Northern Ocean is only navigable during one season of the year. It is mostly surrounded with impenetrable barriers of ice, which impede all navigation toward the east. The western part and the White Sea are navigable from the month of July till the winter sets in. The sea is shallow to a considerable distance from land; the bottom is a spungy clay covered with sand, on which a variety of sea-plants vegetate. The coasts near Kola are rocky and full of cliffs; in other quarters they are moorish and swampy The water of this ocean is slightly salt. It has a sensible tide of two feet and a half in calm weather. In summer it casts up drift ice and drift wood. The most considerable rivers which it receives from Europe are, 1*st*, The Kola, which has its source on the east of the town of Kola. 2*d*, The Voroja. 3*d*, The Panoy. 4*th*, The Kovda, which forms the water of three great lakes—the Kovda, Pija, and Topozero, into the bay of Kandalaskaja. 5*th*, The Kiatne, which likewise carries the water of several small lakes into the White Sea. 6*th*, The Urig which rises in the neighbourhood of the lake Oneyga. 7*th*, The Oneyga rising in the lake Jassa, near the lake of Oneyga, and falling into the sea near the town of the same name. 8*th*, The Düna, a large navigable river, formed by the confluence of the Sachona and the Tug, and abounding in fish. Its course is upwards of 600 British miles. 9*th*, The Mezen. 10*th*, The Petschora, a large river running through uninhabited fields and steppes, in the governments of Vologda and Archangel; and, after a course of 1000 versts, falling into the Ocean. Its banks are limestone, and abound in cliffs and caverns.

The Baltic.] The Baltic forms, undoubtedly, the most important of all navigable waters to Russia. It has three great basins, viz. the gulfs of Finland, Bothnia, and Riga; and has several large islands, such as Oesel, Dagho, and the Alands, and many smaller ones. The Gulf of Finland is formed by the coasts of Finland, Esthonia, and Ingermanland,

[21] The Russian mile, or *verst*, is equal to 3500 English feet, or as 1.06 to 1.60; consequently three versts are equal to two English miles.

and belongs entirely to Russia. It is 160 miles long, and from 22 to 44 miles broad. In some places it has from 50 to 60 fathoms depth of water; in others 10, 6, or 4; and in the Bay of Cronstadt only 2 fathoms. Its northern shores are rugged and precipitous.—The Bothnian Gulf is 300 miles in length, and 100 in breadth. On the east it is bordered by Finland, and on the west by Sweden. At its entrance lies the group of Aland Islands. This basin is almost everywhere from 20 to 50 fathoms deep; and its coasts are rocky.—The Gulf of Riga is bordered by the Isle of Oesel, and the coasts of Esthonia, Livonia, and Courland.—The Baltic receives from Russia and Poland the following rivers, running from north to south-west, viz. 1*st*, The Tornea, which forms the boundaries between Russia and Sweden. This river rises in the Scandinavian Mountains, and falls into the Bothnian Gulf at the town of Tornea. 2*d*, The Kemi-jocki, which likewise rises in the Maanselka, and falls into the same gulf at Kemi. It is nearly three furlongs broad, and full of cataracts; but is navigable only by small boats. 3*d*, The Uleä, which has seven cataracts, but is also navigable. 4*th*, The Pyhäjoki, navigable to the distance of sixty-four miles from its sources. 5*th*, The Kumojoki, which falls into the ocean at Biörneborg. It is one of the greatest rivers of Finland; but is not navigable. All these rivers flow into the Gulf of Bothnia. 6*th*, The Kymen, proceeding from the Lake Pajand and consisting almost entirely of a connected chain of lakes flowing into the Gulf of Finland. 7*th*, The Neva, the outlet of the Great Lake of Ladoga, flowing from the south-west of that lake, and after a circuitous sweep to the south falling by several mouths into the Gulf of Finland at Petersburg. Its banks are from three to eight fathoms in height; its breadth from one to two hundred, and its depth from one to three fathoms. It is everywhere navigable, and never freezes earlier than the 20th of October; but the ice seldom breaks up before the 25th of March. It receives the Mcha, the Tosna, the Ischora, and the Ochta. 8*th*, The Narrova, flowing from Lakes Peipus and Pskow, and falling into the Gulf of Finland at the town of Narva. Two cataracts interrupt the navigation of this stream. 9*th*, The Pernau, a Livonian river, falling into the Gulf of Riga at Pernau. 10*th*, The Aa, another Livonian stream. 11*th*, The Düna, or Drugova, sometimes called the Western Dwina, is a large river which rises in some marshes among the Alaunian Mountains, becomes navigable at Toropez for large vessels; and after having passed Riga, where it has a breadth of 900 fathoms, or rather more than a British mile, falls into the Gulf of Riga at Dunimünde,[22] after a course of 666 miles. Its breadth is various; the depth from two to four fathoms. Navigation is impeded on this river by the occurrence of several shallows and whirlpools, and the vegetation of the *butomus umbellatus*, whose leaves are sometimes 22 feet in length. It receives the Mesa, the Duessa, the Obol, the Evest, the Ogor, and the Riga. 12*th*, The Holy Aa, a small stream which falls into the Gulf of Riga, after passing Mittau. 13*th*, The Vindau, also a river of Courland. 14*th*, The Niemen, a large river, which rises in the forest of Kopaslof, in the government of Minsk; runs through the government of Grodno, and the Waivodeship of Augustovo, into the kingdom of Prussia, where it receives the name of the Memel; and at Ragnid divides into two great branches, the Russe and Gilgo, and falls into the Kurianhaff by several mouths. This river is navigable in summer; it has numerous tributary streams, particularly the navigable Vilia. 15*th*,

[22] *Mundung*, or *Munde*, means, in the names of places, the mouth of a river.

The Vistula. The embouchure of this large river does not belong to the Russian empire. It is joined in Poland by the Pilica, the Nida, the Bzura, the Orvenca, and the Bug. 16*th*, The Varta, a tributary of the Oder, which rises in Cracovia, and passes into Prussia.

The Black Sea, and Sea of Azof.] The Black Sea, in the south of Russia, is bordered by the governments of Cherson, Taurida, and Katerinoslav, the province of Bessarabia, and the lands of the Cossacks of the Don and Tchernomorsk. This sea is nearly of an oval shape; its shores are low, flat, and sandy; several points of land, however, rise from 40 to 50 feet above the level of its waters. It is separated from the Sea of Azof by the Isthmus of Arabat. The Sea of Azof is entirely within the Russian dominions. This sea was anciently called the *Palus Maeotis*. It took its appellation of *Palus*, or marsh, from the muddy quality of its waters: the river Don, which discharges itself at the head of it, bringing with it a great quantity of alluvial matter in its long course. This sea is joined to the Black Sea by the Strait of Kaffa. Where it receives the Don, it is but from 6 to 10 feet deep, its greatest depth in the middle being 48 feet. Its extreme length from north-east to south-west, or from Azof to Arabat, is 210 British miles; and its greatest breadth 120 miles. The following rivers fall into the Sea of Azof, viz. 1*st*, The Hypanis, or Kuban, which rises in north latitude 43° 15′, and east longitude 42° 4′, from the northern foot of Mount Elburz, the central and loftiest summit of the Caucasian range, in the district of Karatschai; and, after a comparative course of 340 British miles, falls into the Black Sea, and Sea of Azof, by two arms; the western arm running into the former, and the northern into the latter, the space included between them forming the Isle of Taman, the *Phanagoria* of antiquity. This river is large, broad, clear, and rapid; free of rocks and cataracts, and admirably adapted for the navigation of vessels which draw but little water. Its stream is successively swelled by innumerable rapid and large streams during 300 miles of its course, descending from the northern slope of Mount Caucasus. From its source to its mouth, the Kuban forms the frontier between the Russian and Turkish dominions. 2*d*, The Don, which flows from Lake Ivanofskoe-osero, in north latitude 53° 55′, and east longitude 38° 30′, and has a comparative course of 660 British miles. This stream—the *Tanais* of the ancients—resembles the Nile, says Dr. Clarke, in almost all its characteristics, having the same regular annual inundations, the same aquatic plants, the same tall reeds, flags, and bulrushes, sometimes rising to 20 feet in height; and forming a delta at its mouth, full of fens and morasses, by the variety of channels into which it divides itself. During the inundations, from the middle of April to the end of June, it is sufficiently deep to admit vessels of burden as far as Voronetz; but is so low for the rest of the year, that upon several of the shallows the water is scarcely 18 inches deep. Where the Don and Volga approximate, the intervening space is not 40 British miles across, and might be easily connected together by a junction canal, which was attempted by the Czar Peter, but never finished. 3*d*, The Berda. 4*th*, The Salghir, the largest river of the peninsula of Taurida. Into the Black Sea falls: 5*th*, The Dnieper, or Borysthenes, one of the largest rivers of European Russia, which rises from a marsh at the base of the Alaunian Mountains, and waters a large and fertile district. Attempts have recently been made to increase the navigable length of this river; its whole length is 1050 miles; but the want of intelligence and industry among the people

on its banks diminishes its commercial importance. 6*th*, The Dniester issues from a lake at the base of the Carpathians in Austrian Galicia; it enters the Russian territory, on the west of Kaminieck, and forms cataracts near Jampol, so that boats cannot ascend it. It terminates in a large *liman*, or lake united to the sea, after a course of 480 miles. 7*th*, The Danube, one of the greatest European rivers, but of which only the lower part, from Galatz to its mouth, belongs to the Russian empire. This river, with its tributary the Pruth, forms the south and south-west boundaries between European Russia and Turkey.

The Volga.] The Caspian Sea, though belonging, according to our division, to Asiatic Russia, is noticed here because it receives the waters of the largest and most important river in Europe, the Volga. This river originates in the Lake of Sceliger, in the forests of Twer, in 56° 50′ north latitude; and, after running a comparative course of 1,700 British miles, falls into the Caspian Sea, having previously formed a number of islands by the division of its stream into nearly 70 branches. During the last 250 miles of its course, it is exclusively an Asiatic river. It is navigable up to Twer, without any interruption from cataracts, the elevation of its source not exceeding 1,200 feet above the level of the sea, which is a very little descent for so long a river. By ancient writers, this river is sometimes called the *Rha*, sometimes the *Araxes;* and is supposed by Rennel to be the *Oarus* of Herodotus, and the eastern limit of Darius Hystaspes march in pursuit of the Scythians. Its chief tributaries are from the east; the largest of which is the Kama, called by the Tartars, *Tschulmen Atel,* rising from the western foot of the Ural chain, and meeting the Volga after a south-west course of 700 British miles in direct distance. At the confluence it fully rivals the Volga in every requisite of a large river. As it is navigable almost during its whole course, it is of great commercial importance to the interior of European Russia. The Oka is the great south-west branch; the Kama conveys to it all the waters of eastern Russia.

Lakes.] The European part of the Russian empire abounds in inland lakes, especially the northern and western parts lately conquered from Sweden, as the lake of Enara Tresk in Lapland, 65 British miles long by 20 broad, the small lakes of Pasvig Kiemi, Kila, Kola, and Pajiskoi, with a great many others in Lapland; the lake of Ulea, in East Bothnia, and a multitude of small lakes in the north-east parts of Finland, too numerous and uninteresting to describe. The most remarkable lakes in Finland are those of the Payana, and Saima or Samen,—the former 70 miles long by 12 broad; and the latter, which is to the east of the former, much larger, extending 160 British miles in length by 30 in greatest width, including its different branches and sinuosities. This lake is connected with that of Ladoga. The Ladoga lake lies south-east of the former, in the government of Viburg, and between the Gulf of Finland and the Lake of Oneyga. It is perhaps the largest fresh water lake, except the Sea of Azof, not merely of the Russian empire, but even of Europe, being 120 miles long by 65 broad, and containing a surface of at least 7,201 square miles. It is uncommonly abundant in fish, particularly seals, and is connected with the Neva by a navigable canal, commencing at the south-west extremity, 67 miles long and 70 feet broad, 10½ feet deep, and having 25 sluices. By means of this canal, the lake is connected with the Gulf of Finland and the Baltic; by the Swir, with Lake Oneyga; and by the Volkhof with the Ilmen Lake. To the north-east of the Ladoga

Lake is the Oneyga Lake, in the government of Olonetz, and 50 miles to the south-west of the head of the Gulf of Archangel, with which also it has a water communication. This lake is nearly 150 miles of extreme length, but is comparatively narrow, and of very irregular form. The Ilmen Lake lies in the province of Novogorod, 125 miles direct south of the Lake Oneyga, into which latter the Volkhof, issuing out of the former, empties itself. It is but a small lake, not exceeding 40 Russian versts in length, by 30 broad. The Lake Peipus, or Tshudskoi-osero, lies between the governments of Pskove, Revel, Riga, and St. Petersburg. It is connected with Pskove Lake by a short and narrow neck. Both these lakes, taken together, are upwards of 110 British miles long, and from 20 to 30 miles broad. The Peipus Lake communicates on the north with the Gulf of Finland, by the Narova River; on the west, with the Gulf of Pernau, by the Em; and it might be connected on the south-west with the Gulf of Riga, by a short canal connecting the streams that fall into the above gulf, with those that fall into the Lake of Pskove. The Bielo-osero, or White Lake, is in the same government with that of the Ilmen Lake, namely, that of Novogorod. It is but a small lake, not exceeding 20 miles in length and breadth. With the Volga it is connected by the river Sheksna, and might be connected with the Oneyga Lake by means of the rivers Vitegr and Rousha, and with the Gulf of Archangel by means of a short canal to the lakes of Voze and Laczа, out of which latter runs the Oneyga river, which falls into the south-east extremity of that gulf. In the government of Olonetz there are 1,998 greater and smaller lakes; in that of Livonia, 1,120; in Jaroslav, 38. Bessarabia contains the Saasijk, the Murtasa, the Alebei Ulu, and Burnassolo, and others. In Poland are the lakes of Bielsko at Bielsk, and the Bladno at Zbaszyna.

Canals.] Numerous canals have been formed in Russia since the reign of Peter the Great, with the view of facilitating commerce. The White Sea is connected with the Caspian Sea by means of, viz. 1*st*, The Canal of Kubenski, projected by Peter I., and again commenced by Paul I., but not yet finished. It is to unite the Sheksna and the Porosovitzà, and complete the communication between Archangel and Petersburg. 2*d*, The Canal of Catherina, begun in 1786, and finished in 1807. It is 17 versts long, and unites the northern Keltma with the Dschuritsch, a branch of the southern Keltma. The Baltic is connected with the Caspian, by—3*d*, The Canal of Vischnei-Volotschock, which unites the Neva with the Volga, by means of the Lake Ilmen. This canal was begun in 1704, and finished in 1804. 4*th*, The Canal of Novogorod, uniting, by means of the Msta and Volkhof, the Neva and the Volga, was finished in 1802. 5*th*, The Canal of Ladoga, finished in 1732, is formed along the southern banks of that lake to avoid its dangerous navigation. It enters the Neva at Schlusselburg, and is 104 versts in length, and 70 feet in breadth. In spring it has a depth of ten feet of water; and at other seasons about seven. 6*th*, The Canal of Tichvin was finished in 1811. 7*th*, The Canal of Siäs, uniting the Volkhof with the Siäs, was finished in 1807. Its length is ten versts. 8*th*, The Canal of Maria, uniting the Vytegra with the Kofscha, is six versts long. It was finished in 1808. 9*th*, The Canal of Oneyga which is to unite the Vytegra with the Swir, and the Canal of Swir which is to unite the Swir with the Siäs, are not yet executed. The Baltic and the Black Sea are united by means of— 10*th*, The Canal of Beresin or Lepel, begun in 1797,

and finished in 1801. Its length is about eight versts, and it unites the Dnieper and the Duna. 11*th*, The Canal of Oginski was finished in 1803, and unites the Niemen with the Pripetz, and thus with the Dnieper. 12*th*, The Royal Canal, uniting the Vistula with the Pina, has been again cleared out. The Gulfs of Riga and Finland are united by—13*th*, The Canal of Fellin, which is to unite the Pernau with the Peipus and the Narova, but is not yet executed. The inland navigation of Finland is conducted by the canals of Telataipolski. Kukontaipolski, Kiafkinski, and Kutioelentaipolski. The two canals of Gerard in the government of Petersburg, are now in a state of forwardness.

Mineral Waters.] European Russia possesses few mineral springs, and even these are seldom employed. The Russian contents himself with his vapour-bath, and pays little heed to medicated waters. Among sulphureous springs, we may enumerate those of Baldohnschen in Courland, and of Krzeszowice in Poland. Among chalybeate springs, are St. Peter's Well at the village of Bulgova in Olonetz; another at Lipczk in the government of Tambof; the steely waters of Andreapole in the government of Twer; the saline marsh springs at Petrasavodsk in Olonetz; and the wells of Nalenczef and Kurof in Poland.

CHAP. III.—CLIMATE—SOIL—PRODUCTIONS.

Climate.] IN such an extensive empire, and so diversified a surface as Russia presents, there must be a great diversity of climate. Russia, in fact, unites almost all the climates of the known world. In Taurida spring is covering the earth with flowers, while around the capital all nature lies yet buried under the snow. The fruit trees on the borders of the Black Sea are covered with blossoms, while around Kola the rein-deer is yet scratching its scanty pittance of moss from under the gelid covering of the soil.

In the Arctic district, the Northern Ocean and White Sea are covered with ice from the end of September to the beginning of June; and the rivers are frozen much earlier and thaw later. In the morasses and lakes the frost is seldom overcome; and the sun's heat does not penetrate above a span into the marshy soil. During the brief and cheerless summer, the atmosphere is loaded with fogs. At Umba on the White Sea, almost under the 67th parallel, the longest day measures thirty of our days; at Kola, in latitude 68° 52′ 30″ it is equal to sixty days; and at Nova Zembla, to three months of our computation. The sun, during this season, appears like an enormous red balloon hanging motionless in the air. During the remainder of the year,

> "Here in her azure coif, and starry stole,
> Grey Twilight sits, and rules the slumbering pole;
> Bends the pale moon-beams round the sparkling coast,
> And strews, with livid hands, eternal frost."

In this region all cultivation ceases; the trees shrink to dwarfish dimensions, and in the extreme north entirely disappear; man alone and the rein-deer endure the climate of the Polar zone; but even the human species appears to lose its commanding aspect and elegant proportions in these forlorn regions. The aurora borealis is very frequent and vivid in this region. Where the Jenesea falls into the Icy Ocean, this pheno-

menon is seen in its greatest brilliancy and most terrific form, every night from October to Christmas.

In the cold district a much milder temperature is experienced; for the east winds begin here to exert their influence, and the cultivation of the soil sensibly ameliorates the climate. Notwithstanding the severity of the winter, most corns ripen to the 65th parallel. The winter lasts till the beginning of April, when moist warm winds from the S.W., accompanied with frequent showers, begin to blow, under the influence of which vegetation makes rapid progress; so that it is not rare to witness ice and snow, green trees and blossoms, succeed each other on the same spot, within the brief space of three weeks. Two warm days do more in this climate than eight in another. A hot and oppressive, yet misty and damp summer, succeeds the brief spring. In June and July the nights are as clear as the days. In August the weather is usually very warm, but cloudy and changeable; and in the beginning of September every thing appears sinking into its wintry sleep. This is an extremely unhealthy season, succeeded only by frost and ice. The longest day at Riga, in latitude 56° 56′, is 17 hours 34 minutes; at Petersburg, in latitude 59° 57′, it is 18 hours 28 minutes; at Archangel, in latitude 64° 33′, it is 21 hours 48 minutes. The cold in Petersburg varies from 22 to 31 degrees of Reaumur. The greatest degree of cold ever experienced in that city occurred on the 4th February 1772, when the thermometer of Reaumur indicated $30\frac{9}{10}$°. The greatest degree of heat was observed on the 17th July 1788, when the thermometer indicated $26\frac{2}{3}$°. The average temperature during the six summer months is $12\frac{2}{3}$°; during the six winter months $2\frac{3}{7}$°. The latest frost uniformly occurs between the 1st April and 12th May, and the earliest between the 8th September and 19th October. During the close season, the thickness of the ice on the Neva averages 28 inches. The reigning winds are the west; the rarest are the south. Oats come to maturity around Vologda, under the 59th parallel, in seventeen or eighteen weeks; pease in eighteen; summer-wheat in fifteen; and flax in twelve. If, says Mr. Pallas, the pear and plum trees be grafted, they perish in winter, and biennial plants rarely resist the cold. The severity of the winter here is not nearly equal to that between the same parallels in Siberia, but exceeds that of Norway.

In the temperate district the climate is uniform, milder, and more favourable both to animal and vegetable nature than in the higher districts. On the northern edge of this region, the summer is brief: but a quick vegetation brings every thing to maturity. Winter is still marked by the long duration and great intensity of the cold. At Moscow the thermometer sometimes descends to 30° of Reaumur. The greatest heat is 27°, but generally much less.[23] The southern half of this district has a severe but brief winter; a warm summer; and a pure and healthy air. Poland enjoys an uniform temperature, and a pure and salubrious air; and the *Plica Polonica*, though an endemic disease, is less attributable to the climate than the manners of the people. The severest cold of winter never exceeds 26° of Reaumur; and the greatest summer heat is never above 26 degrees.

[23] In the winter of 1812-13, during the disastrous retreat of the French army, the thermometer fell on the 30th of November to 16° below zero of Fahrenheit, that is 21° 3′ of Reaumur; and in December to 24° below the same point, 24° 8′ R. on the road from Smolensk to Wilna, in Russian Poland.

In the warm district a flourishing vegetation is found; the climate is delightful, and may vie with that of Southern Europe. Spring commences early; the summer is constant and often dry; and the autumn though late, is always sufficient for gathering in the fruits of the soil.— The winter is short; little snow falls, and frequent thaws occur. The longest day at Kief lasts 17 hours 1 minute; and the average temperature is from 10° to 7° of Reaumur. In the dry steppes the summer-heat is most oppressive to man and beast. There is little rain during this season; and the few streams in the plains or heaths are frequently dried up. The plagues of this district are the dreadful whirlwinds, and an occasional flight of locusts, which sometimes devastate whole provinces;[24] while the rapid changes of temperature, and the bad water, occasion colds, fevers, and agues. The most unhealthy season in the Crimea is the autumn. The Crimean disease is a species of scurvy, to which, however, the inhabitants of this peninsula are not alone subject.

Productions of the Soil.] The diversified soil, climate, and surface of Russia, enable it to support a vast variety of vegetable productions. In an agricultural view, the whole Polar district is of no value whatever; a few firs and junipers, with some mosses and a few grasses, being the sole produce of the soil. The districts watered by the Volga are tolerably fertile as far as the steppes near Astrachan. The most fertile part of European Russia is the tract watered by the Dnieper and Don rivers, called the Ukraine, and the government of Voronesch. In these extensive plains, as well as on the lower shores of the Volga, the soil is a rich fat black mould, strongly impregnated with nitre, and formed from successive layers of vegetable remains. In Livonia the soil is excellent. The plains on the Don are too rich for being manured. The southern parts of Finland are well cultivated by the peaceful and industrious Finns. The fact is, that the tracts conquered at different periods since the reign of Peter the Great, from Turkey, Sweden, Poland, and Persia, in respect of fertility of soil, abundance and variety of produce, are worth more than all the rest of the Russian empire together. Even the comparatively small peninsula of the Crimea is estimated by judicious agriculturists to be alone of more value than all the Russian Asiatic possessions. It is impossible, without going more into detail than the limits of this work will allow, to dilate upon this subject. A short sketch of the different kinds of agricultural produce reared in the chief provinces, is all that can here be attempted. Barley is a general produce, and is employed in Taurida for feeding cattle, and used in the manufacture of spirituous liquor. Millet is widely diffused, while spelt and pease are little cultivated. Rice succeeds well near Kislar in Circassia. Potatoes are neglected, except in the north. Hemp and flax are abundantly cultivated, particularly in the central provinces. Madder, woad, and saffron, grow wild in the woods. Hops are also cultivated, and are found in a wild state in Taurida. Tobacco is cultivated to a considerable extent in the south. The olive has been tried in vain near Astrachan, but prospers in the southern mountains of the Crimea or Taurida. Sugar melons abound near the Don and Volga. Asparagus grows even at Petersburg, where it attains the thickness of a child's arm;

[24] In 1650, a cloud of locusts entered Russia in three different places; from whence they spread over Poland and Lithuania in such astonishing multitudes, that the air was darkened, and the earth covered with their numbers. In some places they lay dead to the depth of four feet; in others, they covered the surface like a black cloth; the trees bent with their weight, and the damage the country sustained exceeded computation.

excellent artichokes are raised at Kief; and onions—of which vegetable Borofsk alone furnishes to the value of 4,000 rubles annually to Moscow—to the 61st parallel. Fruit is common in the south, but rare in the north. Forests of cherry-trees are found in Vladimir, prunes in Little Russia and Cherson, and walnuts in Taurida, where one tree sometimes bears 50,000 nuts. Apricots, peaches, chesnuts, almonds, figs, and other fine fruits are only found in Taurida, where are also pistachia and hazel-nuts. On the Uralian heights are cedar-nuts. The most common fruit in Russia is the hazel-nut, which grows almost to the edge of the Arctic district. A variety of small berries are also every where found. The vine might be cultivated in Russia to the 49th parallel; but is at present confined to the country of the Don Cossacks, Taurida, and some districts upon the Pruth in Moldavia. A very strong and pleasant wine, like the Hungarian wine, is produced in Taurida, of which 100,000 okas are annually exported. In Moldavia, likewise, a good table-wine is made. White mustard, capers, Spanish pepper, anise, and cummin, are found in the south. The *saxifraga crassifolia* is used as a substitute for tea, under the name of Tschagirian tea; this plant is more frequent, however, in Siberia than in European Russia. The saline plants in the southern steppes are little employed. Pure soda is produced in Taurida. Oaks are found to the 60th parallel. There are entire forests of lime-trees in Poland and Lithuania; elms, birches, willows, poplars, alders, aspens, maples, pines, firs, cedars, cypresses, and junipers, are common. The Siberian cedar is rare. The turpentine-tree, the balm-poplar, and the beautiful Byzantine poplar, are found in Cherson. The state of feudal vassalage in which the great mass of the Russian peasantry have long been held by the nobles, has been the great bar to agricultural industry and improvement. But agriculture is now gradually improving; and the southern provinces of this extensive empire may, at no very distant period, become the granary of continental Europe.

Minerals.] Russia produces gold, silver, and copper, of which the principal mines are in the Asiatic part of the empire; but imports quicksilver, tin, and zinc; the semi-metals are rare. Rock-salt is found chiefly near the Ilek, in the vicinity of Orenburg. Coal is scarcely known; but saltpetre, alum, nitre, sal-ammoniac, vitriol, and natron, are abundant. Iron is extensively wrought, and produces about 6,000,000 pouds, or 240,000,000 pounds annually. Of precious and durable kinds of stone, Russia has abundance. The common topaz, the semi-opal, and the jacinth, are found; as also the beryl and chrysolite near Ikaterinburg. Green felspar, and beautiful red and green jasper, are abundant in the Alaunian Mountains. Fine white marble presents itself in some parts; and granite of every kind, from the finest to the coarsest, exists in the primitive ranges.

Salt.] Salt also forms a considerable branch of interior commerce. Of this there are three kinds, namely, rock-salt, lake-salt, and that obtained from brine-springs, or manufactured from sea-water. The chief mines of rock-salt are in the vicinity of Ilek, in the government of Orenburg, in the vicinity of Astrachan, and on the Vilui, in the government of Irkutsk, in Eastern Siberia. The rock of the Ilek is the only one which has yet been wrought, and of late years the quantity has been annually increasing. The most productive salt lakes are the Elton, those in the vicinity of Astrachan, the Indurskian lake, those in the government of Kholyvan, and those in Taurida. The bay-salt is either boiled from the brine of salt

springs, or from sea-water. The most productive and numerous salt springs are on the Kama, in the vicinity of Solikamskoi, in the government of Perm; on the Lovat, near Staraya Rosa; on the Donetz, near Backmut and Tor; on the Volga, near Totna and Balachna; in Taurida, and on the Isle of Taman; on the Düna, near Ustiug; and on the Angara, near Irkutsk. The most productive of these are those of Solikamskoi, which yield annually more than 216,000,000 lbs.: two-ninths are royal property, and the residue belongs principally to the family of Strogonoff. The sea-salt manufactured at Archangel amounts to 7,800,000 lbs. annually. Great, however, as is the quantity of salt of various kinds annually produced, and which gives employment to a great number of boors, and is the source of much inland commerce, yet, from the distance of the mines, springs, or lakes, many provinces are supplied more commodiously as well as cheaper, from abroad.

Fisheries.] The inland fisheries are a source of a considerable commerce. These are the fisheries of the Ural, the Volga, and other waters of the Caspian, which furnish the materials for manufacturing caviar and isinglass, both articles of exportation. The total annual value of the sturgeons caught in the waters of Astrachan, the Kur, and the Yemba, is computed at 1,760,405 rubles, or £352,000 sterling. Independent of sturgeon, however, a great many other kinds of fish are caught, which, with the seal-fishery, make the total value of the Caspian fisheries, 2,500,000 rubles, or £500,000 sterling.

Animals.] To attempt a description of the various animals which roam in the vast plains and forests of the Russian empire, would require volumes. Those in the northern parts, especially sables, ermines, and foxes, furnish the furs which constitute a great part of Russian exportation and internal traffic. In some of the southern parts dromedaries are found, but their number is few. Sheep abound every where except in the more northern parts. Their wool, however, is said to be coarse. Those, in the southern tracts, especially the Circassian breed, have long tails and superior fleeces. The small Tauridan has long fine silky wool. The Spanish breed has been introduced into Lesser Russia and Poland. An excellent breed is produced in the islands of Oesel and Dagho, with wool equal to the English. The Kirgissian sheep is larger than a new-born calf, and has an enormous tail which frequently produces from 20 to 30 pounds of tallow. In the Crimea it is said that common Tartars possess each about 1000 sheep; while an opulent flock is estimated at 50,000; those of the whole peninsula amounting, as supposed, to 7,000,000. The mutton is good, but the wool coarse, though the Tauridan lamb-skins furnish a very pretty fur. Goats and swine abound in the European part of the empire, to the 60th parallel. The chamois antelope (*antilopa rupicapra*) is found upon the Carpathian heights, and the goat of the steppes (*antilopa Saiga*) inhabits the vicinity of the Black Sea. The breed of horses in many places is excellent, strong, and beautiful. Small ponies, like those of Scotland, are found at Archangel. The steeds of Lithuania are noted for strength, and those of Livonia for speed. The horses of Poland and the Ukraine are small but hardy. The strength and beauty of the Tartarian horses are well-known; and they have been much improved by the introduction of the Turkish and Arabian breeds. Wild horses are found in the steppes of the Don. Black cattle are numerous, on account of the vast quantity of pasturage almost every where to be found, and which would be turned to still better

account were the people industrious. Many of the most beautiful pasture grounds are totally neglected, and the luxuriant grass is suffered to rot. Cattle decrease in size as we advance north; those of Archangel, however, are of the large Dutch breed. In Russian Lapland rein-deers are numerous, and perform the different offices of the horse, the cow, and the sheep. In Kamtschatka dogs are used instead of this useful animal. The terrible urus, or bison, is still found in the Caucasian Mountains and in the Polish forests.[25]; and the argali, or wild sheep, is yet hunted in southern Siberia. The ibex, or rock-goat, is frequent on the Caucasian precipices; and large stags occur in the Baikalian Mountains, with the musk-deer and wild boar. Wolves, bears, and lynxes are common. Several species of hares, little known in other regions, are found in Siberia; and the castor, or beaver, is an inhabitant of the Jenisea. The walrus, or large seal, once termed the sea-horse, is common on the Arctic shores, while the common seal is found in the Sea of Azof and the Black Sea.

Birds.] Geese of various species, ducks, turkeys, hens, and pigeons, are found in Russia. Among the wild birds are vultures, falcons, owls, ravens, crows, cuckoos, wood-peckers, ice-birds, bee-birds, lapwings, divers, ducks, albatrosses, petrels, pelicans, mews, sea-swallows, herons—of which one species yields the plume worn by the wealthy Kirgisses—snipes, water-fowls, bustards, pheasants, partridges, blackcocks, woodcocks, the *Lagopus corylorum*, wild-pigeons, larks, starlings, and many others. Singing birds are upon the whole rare in Russia.

Fish.] Eels, shell-fish, cod, salmon, soles, perches, mackarels, pikes, herrings, carps, sterlets, sturgeon, sharks, skates, lampreys, and a variety of other species, are found in the seas and rivers of this kingdom.

Insects.] Among the most valuable insects of Russia is the Polish cochineal or chermes, the scarlet grains of which are sometimes sold for two or three rubles the pound. The silk-worm is reared in Taurida and the Ukraine. There are several kinds of flies, one of which is very destructive to the rein-deer. Here is also found the Pityocampasis, or pine-caterpillar, (*Bostrichus piniperda*),[26] the Asiatic kakalaks, (*Blatta orientalis*), and the tarantula and cantharides. The *scolopendra morsitans* is very dangerous in the south of Taurida. Corals are found in different places; the *Teredo navalis*, so destructive to naval timber, infests the Black Sea. Among the amphibious animals, are turtles, frogs, lizards, and vipers, particularly the *anguis ventralis*.

CHAP. IV.—POPULATION—MANUFACTURES AND COMMERCE—MEASURES, WEIGHTS, AND MONEY.

To state with precision the population of this extensive empire, which comprehends so many different nations and tribes, and is continually augmenting both by conquest and internal improvement, and of which no regular census is taken, is impossible. In this case, probable approxima-

[25] "In tractu Saltus Hercynii et in omni Septemtrionali plaga *bisontes* frequentissimi sunt, boves feris similes, setosi, colla jubis horridi, ultra tauros pernicitate vigentes; capti assuescere manu nequeunt. Sunt et *uri*, quos imperitum vulgus vocat *bubalos*." Solinus c. 23. Vide etiam Cæsaris B. G. vi. 28. et Cuvier, *Recherches sur les ossemens fossiles*, T. iv. p. 108, seq.

[26] The Pityocampasis is never found in the higher latitudes. It is the *Bombix pityocampa* of Fabricius, and greatly resembles the processionary caterpillar of the oak.

tion is the utmost that can be attained. Georgi's details are very faulty; and Wichmann, himself a Russian, who wrote in 1813, fails to satisfy the inquirer. The *Memoires de l'Academie de Petersburg* gives the population of the whole empire, in 1806, as 41,253,483, in which the inhabitants of Petersburg and Moscow, the military and their families, and the Nomades, amounting altogether to 2,960,000, are included. Herrmann calculates the annual increase of the Russian population, from the excess of births over deaths, at 600,000 annually; but he believes that this increase will rather diminish in future. Hassel's calculation is founded on the census of 1793, and reckoning the annual increase at ·15 on each 1000, gives in 1823, a population for the whole of European Russia, of 45,633,203, and for the whole empire 59,263,700. The population of Russia thus exceeds that of any other European State. The population of France and Austria is nearest to it in Europe; but that of China greatly exceeds it, and also that of the British empire, reckoning its colonies. The proportion of the Russian population to that of the rest of Europe is as 44 to 187, or as 1 to $4\frac{1}{4}$; and including the population of Asiatic Russia, $\frac{2}{33}$ of the whole inhabitants of the earth are subject to the Russian sceptre. The ninth part of the whole population resides in towns, of which there are 1,602 in European Russia, besides 201,000 burghs and villages.[27]

Tribes.] No kingdom upon earth is inhabited by so many different tribes, unlike in derivation and language, manners and religion, as Russia. The limits of the empire contain upwards of one hundred of these nations, speaking at least forty different languages. They may, however, be reduced under eight principal heads, viz.:—Slavonians, Finns, Tartars, Caucasian tribes, Mongols, Mandshurs, Polar tribes, and colonists and settlers. Of these the European population is as follows:

Slavonians.] I. Slavonians, including—1*st*, The *Russians*, properly so called, on this side of the Ural. This is a strong race of men, of middle stature and hardy temperament—a quality which they owe in a great degree to their manner of life; but the Russian countenance is generally deficient in expression. They are good-natured, cheerful, lively, irritable, and prone to indulge to excess in spirituous liquors. They have not the nice feelings of honour known in other countries; but courage, skill, strength, and presence of mind, render them the best materials for soldiers in Europe. All the Russians cannot with justice be described as exhibiting the same manners, or a similar mode of life. Those of a superior rank imitate the more polished nations of Europe, particularly the French and the British. Those of an inferior class will no doubt imitate their superiors, but it must be slowly, and in a partial manner; they still, therefore, retain as much of their ancient mode of life as to distinguish them, with sufficient accuracy, from every other

[27] The following table, though old, is curious, as exhibiting the rapid increase of population in European Russia:—

Years.	Heads paying taxes.	Women, in the proportion of 100 to 102.	Nomade tribes and privileged classes.	Total.
1723	5,794,928	4,741,748	1,200,000	11,736,676
1743	6,788,691	5,564,500	1,300,000	13,653,191
1763	9,059,939	7,426,200	1,400,000	17,866,139
1783	13,179,411	10,802,803	1,500,000	25,482,214
1793–6	35,031,238		1,000,000	36,031,238

European nation. As an agriculturist, the Russian cultivates his paternal acres on the same system that his ancestors did before him, without any wish to adopt the improvements of modern times. As a merchant, he is cunning, industrious, and keen. He has no original genius; but a happy conception enables him readily to appropriate the foreign arts; and no one possesses in a higher degree the faculty of imitation. Frederick II. described the Russian character as compounded of distrust and cunning. The Russian is indolent, but greedy. Ready and able to undertake every thing, but changeable in the extreme; he conceives himself an adept in every science as soon as he has mastered its terms. He is very religious, but also exceedingly superstitious. No people place more implicit confidence in charms, omens, amulets, and the favour of particular saints. At the same time, they are extremely tolerant, and no religious persecution has ever occurred in the annals of Russian history. They are likewise polite, hospitable, and generous. The education of the lower ranks is much neglected: the higher ranks are chiefly taught by foreigners. The peasants, in general, wear breeches or trowsers of very coarse linen, with an upper garment, somewhat similar to a coat, formed of coarse cloth, in summer; and in winter, of a sheep skin, with the wool turned inwards. On the legs, instead of stockings, they wear a piece of coarse cloth, or of flannel. Their shoes, or rather sandals, are formed of a kind of platted linden-bark, fixed to the legs with pieces of the same substance. The head is covered with a round hat, or a very high cap. The complexion of the female peasantry is brunette. Their dress is described as having a strong resemblance to that of the women in the Highlands of Scotland,—consisting of petticoats, with a jacket very tightly formed, and a kerchief on the head. All ranks, however, are rapidly adopting the fashions of the other nations of Europe. The female sex are not without a lively disposition and considerable charms; but they are subject to premature old age from the too frequent use of the hot-bath, and in the married state are in general subjected to almost Eastern oppression. The religion of the Russians is that of the Greek church. The upper ranks in Russia feed with the greatest luxury. The food of the inferior class is of the meanest kind. Their bread is of rye, which, with eggs, salt fish, a little bacon, and a great quantity of mushrooms, constitute the chief part of their food. At all their repasts they use a great quantity of garlic. Their common drink is of two kinds, one called *quass*, a kind of fermented liquor prepared from barley, rye, and oatmeal, mixed together; the other is mead made of honey, and sometimes mixed with the juice of the birch. Both these are willingly relinquished for more powerful liquors, particularly brandy. Whisky distilled from malt is also a favourite liquor with them. Their language is accounted a very pure dialect of the Slavonian; it is copious, expressive, and rich in imagery. The Russians are divided into the Great Russians, inhabiting the northern and middle provinces of Russia, and the Little Russians, including the Cossacks, who, since their submission in 1654, have had a military organization. The European Cossack tribes are the Cossacks of Tschernomorski, or of the Black Sea, amounting to 25,000, and forming six regiments: the Cossacks of the Don, estimated at 190,250, and forming eighty regiments; the Cossacks of the Bug, amounting to 6,383, and forming three regiments; and the Cossacks of Tschugujeu, in the Ukraine, reckoned at 7,646, and forming one regiment. The other Cossack tribes belong to Asiatic Russia. 2*d*, The second branch of the

Slavonians is the *Poles*. They inhabit the whole of Poland, and the governments of Kief, Vitebsk, Mohilof, Minsk, Wilna, Podolia, and Volhynia. They are a strong and fine-looking race of men. The Polish women unite to regular features, a fine shape and a certain gracefulness of manner which is seen even in the lower classes. The Pole resembles the Russian in character; but has more patriotism, and manifests a more ardent temperament. The national language and costume still indicate the remains of an independent people. The nobility are numerous; a part of them are possessed of princely riches; the poorer nobles cultivate their own farms; and some of them are so poor as to be obliged to descend to the most menial occupations for subsistence. The Poles are chiefly of the Catholic church. 3*d*, The *Lithuanian* branch of the Slavons is found in the governments of Wilna, Grodno, Minsk, Mohilof, Vitebsk, Bialystock, and Augustovo. They are the remains of a nation degraded by slavery and oppression, and now entirely debased by idleness and drunkenness, though not destitute of nobler dispositions. They still preserve their own harmonious and flexible language, and belong chiefly to the Greek church. 4*th*, The *Lettonians* and *Coures*, in the governments of Courland and Livonia, speak a Lithuanian dialect, and profess the Lutheran creed. Their stature is short, but they can endure great fatigue; and the civil rights recently conferred on the peasantry have considerably elevated them in the scale of civilization.

Finns.] II. There are in European Russia—1*st*, About 1,260,000 Finns Proper. They inhabit the governments of Finland, Petersburg, Olonetz, and Twer. They have their own language, and, with a few exceptions, belong to the Lutheran church. They are a smaller race than the Russians. The men are ill-shaped, with a gloomy countenance, and small gray eyes. They are industrious, phlegmatic, and poor; but honest, and hospitable. In the cultivation of their ungrateful soil they are assisted by the women. 2*d*, The *Esthonians*, a second branch of the Finns, amount to 460,000, and are chiefly located in Livonia and Esthonia. They profess the Lutheran creed. Their language is a dialect of the Finnish; and their occupation agriculture. 3*d*, The *Livonians* are a small and scattered tribe of 1,500 heads. Their language is still preserved at the Salis. 4*th*, The *Lapponians* inhabit the extreme Scandinavian north, and amount to about 7000 heads, who support themselves by hunting, fishing, and pasturing cattle. They are a dwarfish race, seldom exceeding five feet in height; their features are large and flat; their hair yellow, and their beard thin. They are lively, honest, and good natured, and warmly attached to their paternal manners and rude country; but exceedingly superstitious. Their habitations are tents of birch-bark or of skins; their greatest riches are herds of rein-deer. Their language is a Finnish dialect. 5*th*, The Greek and Lutheran religions are professed by the *Syrjäns* or *Komi*, an idle and dissolute tribe, located in the government of Vologda, which has lost its own dialect, and now speaks the common language of the country. 6*th*, The *Tschuvasches* on the Volga, in the government of Nishegorod, are a small wandering tribe speaking a dialect more Tartar than Finnish. They profess the Greek religion, but some of them have remained attached to Schamaism. 7*th*, The *Mordynes*, a tribe of huntsmen and fishers on the Volga, are chiefly Schamans.

Tartars Proper.] III. The Tartars Proper are a fine race of men of

Turkish descent. The genuine Tartar is of middle size; his limbs are meagre but well-shaped; his head is oval, mouth and eyes small, but the latter black and expressive; his complexion is fresh and lively; his hair dark brown, and teeth white. The whole manners of this tribe are open and dignified: they are hospitably and peaceably inclined. Their language is national, and divided into several dialects. They have many schools, and profess the religion of the Koran. The Tartarian tribes inhabiting European Russia, are those of Kasan, amounting to 18,503, and those of Taurida and Bessarabia, estimated at 200,000. The second division of Tartars is the *Nogaiens*. They are Mahommedans, but possess considerable resemblance to the Mongols in Taurida. They amount to about 8000 souls.

Calmucks.] IV. The Calmucks are the only branch of European Mongols. They are scattered throughout Taurida and Cherson, and do not exceed 50,000 souls. They differ little from their Asiatic brethren, leading a nomade life, and professing the religion of the Grand Lama. They are rapacious in their habits, and little esteemed either by the Russians or the Cossacks.

Polar Tribes.] V. The Polar people of European Russia are the Samoiedes, on the coast of the Icy Sea, a diminutive race, amounting to about 2,200 persons, who wander about over the marshy plains of the government of Archangel, and speak a language which is kindred to no other Russian dialect. They are good natured and honest; but insufferably phlegmatic, and prone to indulge to excess in spirituous liquors. Fishing and hunting are their sole occupation.

Foreigners.] Among the foreigners in Russia are about 280,000 Germans. The Russian islands of the Baltic are chiefly inhabited by Swedes. The Danes, French, and English, reside chiefly at Petersburg and Archangel. There are about 13,000 Greeks in the government of Ikaterinoslav; and 9000 Armenians in Taurida and the southern districts, besides Arnauts, Wallachians, Turks, Bulgarians, Moldavians, Raizes—a Slavonian tribe, professing the Greek religion—and Gypsies in the south-western provinces. The Jews in 1820 amounted to 430,000. They are chiefly concentrated in the kingdom of Poland, where they enjoy almost equal rights with the native Christians, and are even employed in the tribunals.

The Russian empire has not yet reached the point of culture of which it is susceptible; yet man alone is not chargeable with its present inferior state, as nature has every where opposed considerable obstacles to improvement. The thinness of the population, and the state of servitude in which a great part of the peasantry yet exist, and which presents no stimulus to industry, greatly opposes even the full cultivation of the better soils. There are also many local difficulties to be surmounted in the exchange of natural products. Thus, in the government of Kief, corn is of so little value that little more is thrashed than the peasant requires for his own subsistence: the rest is left to rot on the field. Wherever these obstacles are removed, and the peasant possesses free property, a visible amelioration in the state of industry is seen.—Nowhere does man bear a greater mercantile value than in Russia. There a piece of land is never valued according to size, quality, and produce, but according to the number of hands which cultivate it. The Russian proprietor does not sell his piece of ground, but its inhabit-

ants; and the Crown bestows not such an extent of territory, but so many peasants on its favourites. A Russian peasant was valued thirty years ago at forty rubles; but he will now bring four times that sum, and sometimes even a thousand rubles.

Manufactures.] Leather is a principal staple article of Russian manufacture. The tanned leather *(youst)* is the finest in Europe; and so jealous are the Russians of keeping their pre-eminence in this article, that nothing certain has yet been ascertained respecting their mode of tanning. One of the chief distinctions of genuine Russian leather is a fragrant smell, which cannot be imitated. The best tanneries are at Serpuchof, Belof, and Tula. The manufactures of isinglass and caviar may be said to be exclusively Russian. The former is made of the bladder of the sturgeon, and the latter of the roe of the same fish. The banks of the Volga and the Ural are the principal seats of these manufactures. Soap is manufactured to such an extent, as not only to supply the internal demand, but also to afford very large quantities for exportation: it is of two sorts, white and black, among the ingredients of which are fish-fat, and linseed oil, and what is called Dutch soap. It is chiefly manufactured by Russian burghers, merchants, and boors. The soaps most esteemed are those of Kostroma, Vologda, Kasan, Arsanias, Moscow, Tzaritzin, Murom, &c. Brewing is carried on to a great extent. The beer of Riga is esteemed the best. Besides beer, large quantities of quass, and mead, birch-wine, cherry-wine, and other varieties of vinous liquors, are brewed. Beer is also obtained from the juice of the birch, which is very spirituous, and causes a great saving of malt. The distillation of brandy is a royal monopoly, and is very extensive and profitable. The privilege of distilling it is vested exclusively—a few provinces excepted—in those nobles who have landed estates. It is computed that 360,000,000 lbs. avoirdupois of grain are consumed annually in the distillation of brandy, the produce of which is estimated at 60,000,000 of bottles. The manufactures of potash and saltpetre are very considerable; the quantity of the latter annually exported from St. Petersburg amounting to 800,000 lbs. In dyeing, the Russians have attained great perfection in almost all its branches, particularly in the dyeing of fur and leather, wherein they are unrivalled. Sailcloth and cordage manufactures are upon a large scale, and furnish one of the most important articles of exportation, as most maritime nations are hence supplied with these necessary articles. Very large manufactories of these are maintained by the Crown, at the admiralty, St. Petersburg, Archangel, and Novogorod. Linen manufactures are very numerous; but are chiefly confined to coarse cloths and stripes, with table cloths. But rich napkins, printed linens, and a small quantity of linens of superior quality, are also manufactured; and a cambric manufactory was established at Yamburg by Catherine II. The finest and best Russian linens come from the government of Archangel; they are of equal breadth to that of other countries, but not so well bleached. The linens made in other parts are not above 14 inches wide. In 1764, the quantity of all kinds of Russian linen exported did not exceed 13,000 arschines, or Russian ells, of 28 inches each. In 1802, the whole value of the linen exported from the different Russian ports in the Baltic, was 3,500,000 rubles, besides what was exported from Archangel. The following table of the importation of cotton-yarn into Russia during five years, may give an idea of the

rapid increase of Russian manufactures of cotton calicoes, &c. The value of the importations amounted in 1822 to rubles in paper, 14,641,483

1823	20,353,698
1824	37,223,625
1825	33,277,436
1826	33,120,544

The following was the amount of Russian manufactures, in 1824:—

Woollen cloths, kerseymeres, serge shawls, blankets, and other woollen goods,	59,748,085
Silks,	10,154,791
Cottons,	37,033,354
Linens,	10,680,504
Total,	117,616,734

Importation of Foreign Manufactures.

	1820.	1824.
Woollens, &c.	22,350,113	9,196,733
Silks,	10,491,039	6,687,327
Cottons,	22,932,933	10,408,299
Linens,	2,381,028	189,420
	58,155,113	26,481,779

Chintzes are made in the vicinity of St. Petersburg, at Schlusselburg, and at Krasnoi-selo. At the other manufactories, the goods worked are chiefly half-chintzes, common cotton cloths, coarse muslins and stockings. Silk manufactories are numerous. At these are fabricated velvets, taffeties, atlases, gold and silver tissues, Peruvians, brocades, and other varieties, especially beautiful hangings, similar, but inferior to those of Lyons. The silk imported is chiefly Italian, received from Holland, some Persian, Buckharian, Chinese, and a small quantity from the colony on the Achtuba. Gold and silver manufactures are few. As much hardware is manufactured at Tula as to supply a great part of the empire. At the cloth manufactories, the chief manufacture is coarse cloths, principally for the army, and a kind still coarser for the peasants and poor people. There is but one manufactory of fine woollens in the whole empire; namely, at Yamburg. The finer woollens are now manufactured in Russia. Hat and felt-making are carried on largely in every part of the empire; but the former are of a very inferior quality. The Tartars and Bashkirs are most expert in manufacturing the latter; some pieces of it, called *voiloks*, are made so large as to cover a whole room. Shagreen is manufactured at Astrachan, principally by Tartars and Armenians; it is made of the best parts of the horse and ass hides, impressed with the hard seeds of certain plants, which trodden on, mark the leather. It is exclusively a Russian manufacture. Notwithstanding that iron is so abundant, and iron founderies are seen wherever mines exist, yet the Russians are far from having much skill in iron manufactures. The only steel, which is made at Ikaterinburg, at a royal manufactory, is of very inferior quality. At Petrazavodsk, in the government of Olonetz, is a large cannon foundery, where iron cannon of excellent workmanship are cast. At this place, along with the other

iron mines belonging to the Crown, in Siberia, all the cannon and warlike implements are founded. The Crown has four manufactories of fire-arms, and other warlike weapons, at Tula, Sestralic, Petrazavodsk, and Orel. The works at any of these places cannot be compared with those of private individuals in England or Scotland, of a second or even of a third rank. The nail manufactories supply, in a great measure, with a clumsy wrought article, the demands of the interior; the shores of the Baltic being supplied with this article by foreigners. Wire and wire-work are also imported; as are almost all their needles and scythes. There are various powder-mills in the empire, especially those for the supply of the army, at St Petersburg, Moscow, and Kasan. Those at Moscow produced annually 216,000 lbs. avoirdupois. A number of porcelain and earthenware manufactories exist in different parts of the empire. The refining of sugar is carried on to a great extent at St Petersburg, Riga, and Revel. Clayed sugars, as well as refined sugars of all sorts, are not allowed to be imported; and the duties on imported raw sugars are very high. The importation of all spirits is likewise prohibited.[28]

Commerce. The Commerce of Russia has advanced considerably of late years; the exports consist almost entirely of raw produce; and in 1805, the exports and imports together did not exceed 22 millions sterling, whilst in 1819 they reached nearly 67 millions. The *Russian Commercial Journal of St Petersburg* gives a concise view of the commerce and navigation of all the sea-ports of the empire, during the first half of the year 1827. According to this statement, the number of ships that had arrived in all the sea-ports of this empire, from the opening of the navigation to the 1st of September, was 2,957, of which 1882 were in ballast. The number of ships that had sailed was 1971, of which only 25 were in ballast. Foreign goods imported and already cleared at the Customhouse, to the value of 83,957,320 rubles. Russian goods exported, 107,427,640 rubles. Coin, and gold and silver in bars, imported to the value of 5,894,788 rubles; ditto exported, only 2,255,334 rubles. Among the principal articles of Russian produce exported, were—flax, 10,461,218 pouds; iron, 47,143 ditto; tallow, 1,370,991 ditto; potashes, 188,283 ditto; raw and dressed hides, 101,610 ditto; corn, value 17,651,181 rubles; timber, 1,283,640 ditto. At Riga, the imports in the month of May were to the value of 1,674,731 rubles; the value of Russian produce exported, 14,801,729 rubles. The exports from Archangel, in the same month, 1,110,321 rubles. The commerce of Russia embraces a much wider field than its manufactures

[28] The following was a list of the Russian manufactories in 1803, throughout the whole empire; and they are supposed to have at least trebled in number since, 17 of the following having been established that same year:

Manufactories.	*Number.*	*Manufactories.*	*Number.*
Of gold and silver leaf, gold lace, wire, &c.	37	Ropes,	55
Steel, cast iron, needles, and other articles of iron and steel,	26	Potash,	84
Brass manufactories,	37	Tobacco,	6
Clocks and watches,	1	Sugar-houses,	6
Porcelain, earthenware, &c.	55	Powder and Starch,	12
Colours, dye-stuffs, &c.	12	Japanned wares,	1
Glass-houses,	107	Woollen cloth, and other woollen articles,	155
Linen manufactories,	283	Hats,	71
Cotton do.	53	Silk,	322
Printed Cotton do.	49	Leather,	843
Cotton cloths,	88	Total,	2,364
Paper,	62		

This is chiefly to be ascribed to the vast extent of its territorial surface, the number of seas and rivers by which both the interior and sea-coasts are pervaded and washed, and the vast variety of tribes by which it is inhabited, and nations by which it is surrounded. The Russian commerce may be arranged under the following heads: namely, 1st, The inland trade with China, through Siberia. 2d, That with Persia and the Caspian. 3d, That with Turkey. 4th, The trade of the interior. 5th, The commerce of Archangel. 6th, The commerce of the Black Sea, and the commerce of the Baltic. The three last heads comprise the whole foreign European commerce of the Russian empire.

Chinese Trade.] The commerce with China commenced about the latter end of the 16th century, and was chiefly conducted by caravans; but the trade is now laid open on payment of certain duties. Kiakta, in the government of Irkutzk, on the Chinese frontier, 4,200 miles from Moscow, and about 1,500 from Pekin, is the place appointed by treaty in 1727, where the merchants of both empires meet annually to transact business: and the bulk of this commerce is monopolized by Irkutzk. This place of rendezvous forms in fact two towns, the one Chinese and the other Russian. It is the only town in Siberia, excepting the capital, with any appearance of civilization. It is garrisoned by a detachment of Cossacks, and is fortified with batteries and bastions. The Chinese conduct their trade by a company, and seldom fail to outwit their Russian neighbours. The Russians exchange fur, oil, tallow, tapestry, paper, knives, hatchets, &c., chiefly for Chinese silks, porcelain, tea, aniseed, musk, tiger-skins, caskets, and ornamental boxes, drugs, sweetmeats, &c. All the tea used in the Russian empire is obtained direct from China through Siberia. The annual quantity brought to St Petersburg exceeds 500,000 lbs.

The Caspian Trade.] The trade of the Caspian is not only carried on with Persia, but also with all the independent Tartarian tribes to the east and south-east of that sea; with Cashgir and Yarkand, in the Lesser Bucharia; and even with the western part of Tibet, and the fertile vale of Cashmire. Russian caravans of 500 or 600 together, have lately, it is asserted, come on horseback to the fair of Ghertokh, or Ghertope, and by supplying the Tibetians with coral-beads, cut up the trade in that article from Delhi and Benares. The chief marts of this commerce are Astrachan, Orenburg, Gurief, Terki, Derbent, Tarku, Baku, and Sallian. Astrachan is the chief seat of the Persian commerce, there being above 5000 resident merchants there, many of whom have ships on the Caspian, and export to Persia woollens, furs, iron, steel, lead, linen, and other Russian products, procuring, in return, silk, from Ghilan and Samarcand; cotton from Mazanderan and Ispahan; as also, drugs, tapestry, gold, pearls, and diamonds, which articles also constitute the trade of Orenburg and Kazan. Great quantities of raw cotton are brought to Orenburg by the Tartars of Khiva, or Khawarazm, who also bring gold and gems to Astrachan. The Tartar havens to which the Russian merchants resort, are those of Mangushlak, and the ports in the Bay of Balkan. From an idea that the gold and gems brought by the Khivensian merchants to Astrachan, were the natural produce of the country, the Russians attempted a settlement in 1720, on the east of the Caspian, in order to pave the way for the conquest of Khiva; but the Tartars suspecting the design at the very first, rose upon the Russian forces, and cut them off. A great trade is carried on at Orenburg with the Kirgisian Tartars, in cattle and

horses. Another equally great annual fair is held at Omsk, whither articles of the same kind, and to an equal amount, are brought by the middle Kirgisian horde. In return for these, the Russians supply these hordes with cloths, furniture, and other manufactured goods, but are prohibited from supplying them with arms, ammunition, and other warlike stores and implements, as they are very troublesome and restless.

Turkish Trade.] The commerce with Turkey is chiefly carried on at the European frontiers of both countries. Tcherkasky, on the Don, is considered as the principal emporium of this inland commerce, which has, however, much declined of late years. The chief commerce with Turkey is carried on, by way of Taganrog, with Constantinople. The chief imports are Grecian wines, olive oil, silk, and cotton, &c. Furs are annually exported by land from Russia to Usungiora and Silemnia, in Romelia, where are annual fairs, and where they are bought by the Turkish shopkeepers. The maritime Turkish trade was wholly in the hands of the Greeks, and is totally distinct from the foreign European commerce which Russia enjoys by means of these seas. To this must be added importations of silk and cotton goods, imported partly by land and partly across the Black Sea, into the Russian dominions, to the value of between 2,000,000 and 3,000,000 dollars annually.

Siberian Commerce.] The inland commerce is that conducted in Siberia between the inhabitants and the various roaming tribes subject to the Russian sceptre, and that which is conducted in European Russia. No strangers are permitted to interfere in this trade, which is confined wholly to natives, or Russian subjects. Great numbers of Bucharians are settled in different places of Siberia and Russian Tartary, who, being active, and industrious, carry on a correspondence through different parts of the empire, as well as with their brethren of the same nation in Persia, Independent Tartary, and Hindostan. They, with the Armenians, are the most commercial people in all Russia,—perhaps in the world. Tobolski is chief centre of the Siberian inland commerce, being frequented not only by Russians and Tartars, but also by Bucharians, Hindoos, and Calmucks. The interior commerce of European Russia is far more considerable. The cities of Moscow, Tula, Jaroslav, Novogorod, Volotschok, Pleskof, Twer, Smolensko, are all noted for their inland commerce. Makerief had a great annual fair in July, which was one of the most frequented and most important in all Russia, being every way equal to the most celebrated fairs in Europe, such as those of Frankfort and Leipsic. It was attended by very great numbers of merchants, both Russians and foreigners, who brought goods to the value of several hundred millions of rubles. But in the summer of 1810, the buildings appropriated for magazines and shops were entirely burnt down, and the fair was removed to Nyshni-Novogorod in 1821. Nyshni, built on the confluence of the Oka and the Volga, presents great advantages as the site of a large commercial fair. By means of the two rivers it maintains an easy communication with the richest agricultural and manufacturing provinces of Russia. The productions of China are carried during the month of September over the Baikal Lake, and in spring reach the Volga along with the Siberian caravans. The productions of Astrachan, Persia, and Bucharia, ascend this river, while those of Petersburg, Germany, England, and France descend it; so that the productions of the East and West meet as in a common centre at Nyshni-Novogorod.

Baltic Commerce.] The chief articles of exportation from the Russian

ports in the Baltic and Archangel, are leather, hemp, flax, tallow, iron, tar, pitch, linseed, ashes, timber, and grain. The best hemp comes from Riga and St Petersburg; that from the other Baltic ports is inferior in quality, and proportionably dearer. The best flax likewise comes from these two ports; but the quantity exported from St Petersburg bears no comparison to that from Riga. Tallow is regularly cheaper at St Petersburg than in the other Baltic ports; and it is also the best place for iron. The best linseed is that of Riga and Pernau. Timber is chiefly exported from Archangel, Narva, Riga, Pernau, and Wyborg; oak timber from Riga only. The best tar comes from Archangel. The best ashes are those of St Petersburg and Riga. Grain is chiefly exported from Revel, Riga, Leibau, and excellent barley from the Island of Oesel. The following are the only ports by which foreign commodities are allowed to enter the Russian empire, namely, Archangel, St Petersburg, Riga, Revel, and Leibau, in the White Sea and the Baltic; Odessa and Theodosia (Kaffa) in the Black Sea, and Taganrog in the Sea of Azof. By land, the following places only are allowed for the importation of foreign European articles and colonial produce, namely, Kofno, Brest Littoffsky, Radzuvileff, and Dubosar. Salt may be imported any where. The chief articles imported are woollens, silks, cottons, cotton twist, cotton wool, thread, colonial produce, coals, salt, &c. In 1803, the total importations by sea were 34,339,260 rubles; and the exportations 59,007,544. In 1819, the importation at Petersburg alone amounted to 110,670,350 rubles; at Riga, to 10,532,560; at Odessa, to 5,284,233; and at Archangel, 442,203 rubles; while the exports from the first port amounted to 85,998,642; from Riga, 42,728,375; from Odessa, 14,016,809; and from Archangel, 6,031,088. A very interesting branch of the commerce of Archangel is that carried on, by Russian fishermen, with the Finns, on the northern coast of Norway, called Finmark or Danish Lapland. About the end of July, when the fishing season begins, numerous vessels resort to Hammerfist, in the island of Qualoe, in 70° north latitude. As soon as the Russians appear, the Finns set about catching fish, which they barter with the Russians for meal, who salt and prepare the fish in their own manner. The Finns are thus enabled to spend their time wholly in catching fish, for which they receive their whole winter's provision immediately by barter from the Russians, the latter giving 36 lbs. of meal for the same quantity of fish.

The Commerce of the Black Sea.] The Russian foreign commerce in the Black Sea and the Sea of Azof is now very extensive. The city of Odessa is entirely modern, situated 30 miles to the east of the mouth of the Dniester, and 60 from that of the Dnieper; and, so late as 1792, its shores were a mere plain. The port is secure and convenient, with a depth of water sufficient to admit the largest ship of war, and is seldom closed by frost, with good anchorage on a fine sandy and gravelly bottom. A large mole was built by the Duke de Richelieu, then its governor, extending half a verst into the sea, as also several small ones, and a handsome quay more than a mile long. In 1816, the population increased to 24,000 within the gates, besides 16,000 in the suburbs and vicinity, exclusive of 30,000 Germans colonists in the neighbourhood. By an ukase of the emperor Alexander, in April 1817, Odessa is declared a free port to all nations. There is little room to doubt, that the commerce of Odessa, if judiciously managed, will in a few years exceed that of the Baltic, being the natural outlet for the surplus produce of the fertile Ukraine and

southern Russia. A communication by steam boats has been established between Odessa and Cherson.

Commerce on the Sea of Azof.] The foreign European commerce of the Sea of Azof has also proportionally increased. In 1803, 210 foreign vessels loaded at Taganrog: and in 1817, no less than 387 ships of various nations sailed from its ports, besides 132 vessels employed as coasters. The imports for 1817 amounted in value to 8,240,894 rubles. Value of goods exported, 11,979,700 rubles. In addition to the commerce of the Baltic, Black Sea, and Sea of Azof, the fisheries of all these seas afford an extensive and valuable commerce.

American establishments.] The Russians are rapidly extending themselves along the American coast. In Norfolk Sound, they have a fort containing upwards of 100 pieces of cannon. Since 1813, they have occupied upwards of 500 leagues of coast towards the Colombia River, and have established themselves at Bodoga, within 30 leagues of Spanish California. They have greatly improved the intercourse between Petersburg and Kamschatka. Every year a number of their fur-ships sail from the N.E. coast of America, double the Cape of Good Hope, and enter the Gulf of Finland. The Russians have been equally attentive to their colonies in Eastern Asia, and it is quite evident that in a short time they will engross the whole fur-trade with China.

The first Europeans who traded with Russia were the merchants of the Hanse towns, who, for a considerable period, enjoyed the monopoly of this commerce. About the middle of the 16th century, the English succeeded to a share of the Russian trade. An English company was erected in 1555, by Queen Mary, for the purpose of trading to Archangel; to which the Tzar Ivan granted many exclusive privileges. These were, however, first restricted by Feodor, who succeeded Ivan, and then abolished by Boris Godenoff, the successor of Feodor, who proclaimed the trade to be free in all parts of his dominions. The English were consequently rivalled not only by the Hanseatic merchants, but by the Dutch; who, by offering to pay a duty of 15 per cent. on exports and imports, obtained many of those immunities and privileges formerly enjoyed by their rivals. The commerce with Russia afterwards underwent many revolutions, sometimes being in a flourishing state, and sometimes almost annihilated; till 1797, when a treaty of commerce and navigation was concluded between the two powers. This treaty continued to regulate the commercial intercourse between Britain and Russia, till the famous convention among the northern powers, for abolishing the belligerent right of Britain to search the vessels of neutral nations trading with any hostile power. In a short time, however, this convention was dissolved, the treaty of 1797 was virtually recognized, the right of searching explained, and the articles to be accounted contraband of war were enumerated. In consequence of the growing power of France, then at war with Great Britain, Russia was again obliged to accede to the continental system of Napoleon Bonaparte; and by the treaty of Tilsit, in 1807, all commerce between Great Britain and Russia was interdicted. In 1812, however, when Alexander threw off the French yoke, the commercial intercourse was again restored to its former footing. The foreign European commerce of Russia is of vast consequence to that empire, as thereby the surplus produce of every kind produced in the interior, is disposed of. In Russia and Poland this surplus is far more considerable than in the other countries bordering the Baltic. It is this

export which forms a principal source of the annual revenue of the Russian nobility; and any war which involves in its consequences the loss of commerce, especially that of the Baltic and the White Sea, deeply affects the immediate interest of the Russian nobility, as it thereby deprives them of the profits of landed produce, and the labours of their vassals. A war attended with such effects is certain of being unpopular, especially if carried on with a power sufficiently able to keep possession of the principal communications of the Baltic with the Atlantic, and to blockade the Russian ports.

Measures, Weights, and Money.] The English inch is universally adopted throughout the Russian empire; and the English foot very generally used in Petersburg.

Table of Long Measure.

1 foot=13.75 inches English.
1 fathom or sajen=7 Russian feet.
1 Verst { =500 sajens.
{ =5 furlongs, 12 poles, or 1,166 yards, English.

The Russian pound is the same for gold, silver, and merchandise.

Table of Weight.

The smallest weight is the solotnick=6 grains.
3 solotnicks=1 lot.
32 lots=1 pound.
40 pounds=1 poud.
1 poud=36 lbs., 1 oz. 11 drs. avoirdupois.

The polusca, an imaginary piece of money, equal in value to $\frac{27}{200}$ths of a penny British currency, is the unit in Russian currency. The denaska, the lowest real coin, is equal to 2 poluscas; and 2 denaskas equal one copeck, whose value is therefore equal $\frac{27}{50}$ths of a penny British. Ten copecks are equal to 1 griwna; and 10 griwnas to 1 ruble. The ruble, a silver coin, is thus equal to 4s. 6d. British currency. But there is a depreciation of 30 or 34 per cent. upon the paper ruble—100 rubles being equal to 135 of paper currency. The Tzarvonitch, the lowest gold coin, is equal in value to 2¼ rubles. The imperial, a gold coin, equal in value to 5 rubles, and the double imperial are very rare in Russian currency. The paper currency is called by the Russians and Poles *pomaschki*, by the Germans *bank-assignats*, or only assignats. The texture of the assignat paper is very thin, and they are often torn in their constant circulation; but as long as all the pieces are kept together, by pasting them on another paper or otherwise, and the number of the assignat and its value are legible, it must be taken.

Computation of Time.] Russia is the only European empire in which time continues to be reckoned by the Julian almanack. In business with foreign countries they use both the Julian and Gregorian dates.[29] The

[29] It may be proper to explain to the reader the difference between the old and new styles, or the Julian and Gregorian kalendars. The former received its name from the Roman emperor Julius Cæsar, who finding that the months had considerably receded from the seasons to which they had been adjusted by Numa—the year of Numa being ten days shorter than the solar year—introduced a more correct method of computation, by adding 10¼ days to the kalendar year. But as the true solar year consists of 365 days, 5 hours, 48', 45½", the addition made was too great, so that in the space of 131 years after the Julian correction, the sun was found to arrive one day too soon at the equinoctial points. This error went on increasing, of course, till A. D. 1582, when

Greek church commences its chronology with the year of the world, and writes 7380, instead of 1827; but this calculation is confined to church records. The Tartars, like the Mongols, calculate by periods of twelve years.

CHAP. V.—RELIGION—LITERATURE—ARTS AND SCIENCES—ESTABLISHMENTS FOR EDUCATION.

Religion.] THE established religion of Russia is Christianity, according to the ritual of the Greek church—a ritual to which they have adhered ever since the introduction of Christianity by the Byzantine missionaries. They have not retained this ritual, however, in its pure state; but have mingled it with many superstitious ceremonies originating, probably, in the pagan religion of their ancestors. The Greek church differs considerably in its tenets from the Romish or Latin church. The Pope's supremacy is not allowed; and they do not admit of images in their churches, though they have no objection to pictures. The Christians of the Greek church make use of auricular confession. They communicate in both kinds. The bread, which is leavened, being soaked in the wine, which is mixed with a little water; but they believe that these, after consecration, become the real body and blood of Christ. The liturgy is that of St Basil, and the creed is that of Athanasius. Not only the Virgin Mary and other saints are worshipped, but adoration is paid to crosses and relics. During the year they have four fasts; when they not only abstain from flesh and fish, but will not make use of a knife which has cut flesh, till upwards of twenty-four hours after the accident. Exorcisms attend their baptismal ceremonies; and the child is plunged in water three times. The sacrament is administered to dying persons; and extreme unction is judged to be indispensably necessary. When a person is buried, his friends deposit in the coffin along with him, a pair of shoes, a piece of bread, some pieces of money, and a certificate from the priest, recommending him to St Nicholas and St Peter. St Nicholas, indeed, is held in the greatest veneration by all classes, being esteemed the tutelar saint of the empire. But many other saints meet with considerable respect; among whom may be reckoned St Anthony of Padua, who, upon some affront received from his countrymen, instead of flying overland, in the nearest way, embarked on a millstone, passed through the strait of Gibraltar, coasted northwards along the Atlantic, and entering the Baltic, sailed along the lakes Ladoga and Oneyga, till he arrived at Novogorod.

The Russians have many prejudices concerning what kinds of meat are proper to be eaten, and what are improper. Swine's flesh is reckoned good food; but they refrain from tasting the flesh of horses, elks, calves, hares, and rabbits. The milk of asses and of mares is likewise avoided

the seasons were found to have receded ten days; and Pope Gregory XIII., with the assistance of several eminent mathematicians, published a new kalendar, which by the intercalation of one day in February every fourth year, has rendered the computation of time nearly, though not altogether accurate. The Gregorian, or new style, was immediately introduced into all Catholic countries; and the Protestant states gradually adopted it. It was introduced into Great Britain by act of Parliament, 1752, when the 3d was ordered to be reckoned the 14h of September. By the same act, the beginning of the year was changed from the 25th of March to the 1st of January. The Russians, notwithstanding their obstinate adherence to the old style, generally recognise both styles in their letters, writing the corresponding date of the new style under the old.

as unclean. Pigeons are not eaten, because they are the visible representations of the Holy Ghost. The superstitious notions of the Russians are not confined to the selection of food; they extend to matters apparently still more indifferent. They affirm that nothing has a greater tendency to procure salvation to man, than the ringing of bells on certain days of solemnity. On these days, all the bells of the empire are in motion, from sunrise till sunset. To assist in the labours of ringing is an act of the most meritorious piety; and to every bell is attached a great number of ropes, which extend from the steeple to huts built around it, for the convenience of such as choose to exercise themselves in this kind of worship, But the efficacy of bells is not more mysterious than that of the number *forty;* a number for which, on all occasions, the greatest predilection is shown. In order to have an opportunity of employing it, instead of saying twenty shillings, a Russian would say forty sixpences. The furriers dispose of their skins in bundles of forty each. When reading the litany, the priests conclude with repeating forty times, at one breath, 'God have pity on us;' and two of their Lents consist each of forty days.[30]

It has already been observed, that those of the Greek persuasion admit not the worship of images, but they allow the most fervent adoration to be addressed to pictures.[31] In almost every house is a small chamber or chapel, in which is found the picture of a saint upon a board variously decorated, according to the wealth of the proprietor. The picture is called a *bog*, and on all occasions attracts a great deal of attention, and occasions the performance of many ceremonies. These *bogs* are not confined to the low and illiterate; they are found among the nobles; and Chantreau mentions a member of the directing senate, called Scheremetoff, who had a cabinet of *bogs*, valued at more than 1,000,000 of rubles! In several places of Russia are markets, where these representatives of the saints are exposed to sale. Their price is always marked upon them; and it would be a sin to offer less than is asked, as well as to ask more than the true value. In making the purchase, indeed, the words buying and selling must be cautiously avoided. The most fashionable *bogs* are said to be St Nicholas, St John the Baptist, St Serge, and St Alexander Nefski. Like the inferior deities of ancient mythology, each has his peculiar province. St George has the care of horned cattle, St Anthony superintends horses, St Jonas rules among fishes, St Antippe has the power of the toothach, and the Virgin has the power of almost every thing.

[30] However whimsical this predilection for the number forty may appear, they are not destitute of reasons in support of their notions. They argue that not only Moses, but Elias and Jesus, fasted forty days. That forty days was the space between Jesus' resurrection and his ascension. That the life of Moses was divided into three remarkable periods of forty years each. At the end of the first forty he fled from Egypt; at the end of the second, he led the Israelites from the same country; and at the end of the third, he died; and that, lastly, among the Jews, the transgressors of the law received forty stripes.

[31] The miraculous power of images is to this day universally acknowledged in Russia. In the year 1812, when Russia was invaded by the French, Augustin sent the miraculous image of the Mother of God of Smolensk to his Imperial Majesty, accompanied by his benediction. The Emperor received the image with all due solemnity, and returned thanks for the attention and prayers of the Metropolitan. Before the celebrated battle of Borodino, Kutusof, surrounded by religious and military pomp, took his station in the middle of the Russian army, while the papas and archimandrites, habited in their most splendid robes, marched before the commander-in-chief, carrying the symbols of their religion and the elevated image of Smolensk, which received the homage of the whole army.

Notwithstanding the ignorance which is prevalent among the Russians, toleration is one of the maxims of government. This toleration, however, is not owing to the liberality of the common people; for, in religious matters, *they* have no liberality; it is due entirely to the enlightened policy of the sovereigns of that country. Peter I. laid the foundation of this religious forbearance. Before his time the religious matters of Russia were under the direction of a Patriarch, who enjoyed very extensive, and, in some cases very dangerous privileges. That sovereign, to whom no undertaking was too arduous, curbed the power of this religious potentate, and gave the nominal management of religious matters to a general meeting or synod, but reserved to himself the real power.

Easter Festival.] At Easter, a ceremony is performed peculiar to the Russian church, which is certainly one of the most imposing spectacles ever invented. A representation of the sacred tomb is exposed to the people during the evening; and at night the resurrection is announced in all the churches throughout the empire. Mr James, who witnessed this extraordinary spectacle in 1814, gives the following account of it: "We entered the Kasan church at a late hour. The nave, the aisles, in short, every part was crowded to suffocation with a host of devotees; thousands of lighted tapers—for each bore one in his hand—glittered over the whole area, spreading an illumination as bright as noon. As the hour of twelve approached, all eyes were earnestly bent on the sanctuary, and a dead silence reigned throughout. At length the door opened, when there issued forth a long train of banners, crosses, &c. with archimandrites, protopopes, and priests of all ranks, dressed in their sumptuous robes of embroidered silk, and covered with gold and silver, and jewels: they moved slowly through the crowd, and went out from the doors of the church, as if to search for the body of our Lord. In a few minutes, the insignia were again seen on their return, floating above the heads of the mob, along the nave; and when the archbishop had regained the altar, he pronounced with a loud voice, *Christos volseress*, 'Christ is risen.' At that instant the hymn of praise commenced, and a peal of ordnance from the fortress re-echoed the joyful tidings through the city. The mob now saluted and congratulated one another in turn, for the days of fasting were at an end: tables spread with provisions in a short time made their appearance in the church; the forbidden meats were tasted with eager appetite; and a feast of gluttony, that annually proves fatal to some of the followers of this religion, took the place of penance and prayer."

Festival of the Seasons.] The same traveller describes another religious ceremony which he witnessed at St Petersburg. "In the fervency of that ostentatious gratitude that characterises the Russian church, the verdure, when it first appears in spring, annually receives a solemn benediction. The places of worship, as well as private houses, are filled with the consecrated boughs borne by the devotees; and, on the first Sunday after Ascension-day, the same priests who poured their blessing on the frozen water in the winter, hail with similar ceremonies the summer vegetation." A procession takes place on this day, as well as on the first of May, (which is kept as a *fête* throughout the North,) to Ikaterinoff. Hither, the court, all the gay world, and all who can hire a carriage of any description, repair to hail the first burst of the genial season; sometimes above 2000 carriages make their appearance in the procession.

Blessing of the Waters.] Mr Coxe was present at the celebration of the singular rite above referred to,—the blessing of the waters, which used

to be performed upon the Neva with great pomp and solemnity, the sovereign attending in person upon the ice, and all the regiments of guards being drawn out on the occasion. Its pomp, though still splendid, is now much diminished. "Upon the frozen surface of a small canal, between the admiralty and the palace, was erected an octagon pavilion of wood, painted green, and ornamented with boughs of fir: it was open at the sides, and crowned with a dome supported by eight pillars. On the top was the figure of St John with the cross, and four paintings representing some of the miracles of our Saviour: in the inside, a carved image of the Holy Spirit, under the emblem of a dove, was suspended, as is usual in the sanctuaries of the Greek churches. The floor of this edifice was carpeted, excepting a square vacancy in the middle, in which an opening was cut in the ice, and a ladder let down into the water. The pavilion was enclosed by palisadoes, adorned with boughs of fir, and the intermediate space was also covered with carpets. From one of the windows of the palace a scaffolding was erected, ornamented with red cloth, which reached to the extremity of the canal. At the time appointed, the empress appeared at the window of the palace; and the archbishop, who was to perform the benediction, passed at the head of a numerous procession along the scaffolding into the octagon, round which were drawn up a few soldiers of each regiment quartered at St Petersburg. After having pronounced a few prayers, he descended the ladder, plunged the cross into the water, and then sprinkled the colours of each regiment. At the conclusion of this ceremony, the archbishop retired; and the people rushed in crowds into the octagon, drank with eagerness the water, sprinkled it upon their clothes, and carried some of it away for the purpose of purifying their houses. I was informed," adds Mr Coxe, "that some of the populace plunged into the water, and that others dipped their children into it; but, as I was not myself witness to these circumstances, I cannot vouch for their truth."

Ecclesiastics.] Every ecclesiastic in Russia is called *popa* or pope, as in the earlier ages of the church. The upper classes of priests are called *protopopes.* All the ecclesiastics wear long beards and long hair, believing that this makes them resemble the great founder of their religion. The ordinary priests or popes wear long garments of black or brown, with a high square cap. The robes of the higher classes of priests are distinguished by being richer. Mr Coxe remarks—and the remark is still applicable—that persons of the sacred profession are seldom seen at the tables of the nobility or gentry. During the five years that he passed at St Petersburg, though in almost constant intercourse with the latter, he never saw at their table an ecclesiastic. "It must be allowed," he adds, "that the parish priests are, for the most part, too low and ignorant to be qualified for admission into genteel society, while the dignitaries, being a separate order, and restrained by several strict regulations, reside chiefly in their palaces, within their monasteries. There are thirty-three archbishoprics and bishoprics. Formerly, the monasteries possessed immense estates, but Catherine II. annexed them to the crown, and assigned £1000 or £1200 a year to the bishops and archbishops. The parish priests are very poor; a wooden house, a small portion of land, and from £10 to £20 constitute all that they receive.

Early Literature.] The dawn of Russian literature is found in its old popular songs, once much neglected but now beginning to draw attention on account of their similarity to the romantic ballads of the Spaniards,

English and Scandinavians.[32] In the period to which these old ballads belong, viz. from the 11th to the 13th century, national poetry had not yet renounced the old Slavonian mythology; hence the tales and popular traditions of Russia have peculiarly fantastic charms. Vladimir I. with his knights, figure in these traditions like king Charlemagne and his peers, or the English Arthur and his knights of the Round Table. But unfortunately, with the exception of an epic poem narrating the expeditions of Ighor against the Polofses, the action of which falls in the year 1185, no relic of the earlier Russian poetry has reached us. The age of the poet himself probably belongs to the 14th century. Ecclesiastics were almost the sole cultivators of Russian literature in the earlier periods. Nestor, a monk of Kief, in his annals of Russian History from 862 to 1110, relates events in the Byzantine manner, but very simply and with strict adherence to truth. This work is the earliest source of our geographical knowledge of Northern Finland and Slavonia. Bishop Sylvester, and two anonymous chroniclers, carry down Nestor's work to 1203. Schools and colleges, however, were long wanting to second these infant efforts in literature; and it is somewhat singular, that even the Greek teachers generally employed in the Russian schools did not inspire any love of Grecian letters. The Mongolian tyranny destroyed the germs of civilization in Russia; only in the rich convents which these invaders spared, some relics of literature were preserved.[33] Till

[32] The attachment of the Slavonians to song is noticed by ancient as well as modern writers. Procopius relates that on one occasion when the Slavonian camp had been successfully surprised by the Greeks, it was found that these rugged warriors of the North had been lulled into fatal security by the intense devotion with which they had listened to the songs of their bards. Leclerc, in his *Histoire de Russie*, is greatly puzzled to account for the attachment of the peasantry to songs in conjunction with their servile disposition, and slavish habits of thought; "une gaiete bouffonne," says he, "qui contraste avec la servitude et qu' on ne trouve point chez les peuples du nord." Most of the Russian songs begin with allegories, more or less related to the main subject. The richness of the Russian language in diminutives and terms of endearment, such as—'My soul,' 'My little heart,' 'My joy,' even 'My little father,' 'My little mother,' confers a pleasant feature on their songs and conversation. These names are even bestowed on inanimate objects. Thus, *Moscow*, is often called *Mother Moscow*; the Volga, *Mother Volga*. Nor is the language by any means destitute of terms of vituperation and contempt. In their songs they call themselves 'the People of God,' 'the chosen,' and their Tzars, especially Ivan Basilovitch, 'the severe,' 'the dreadful.' The cuckoo and the nightingale are their birds of complaint. The black raven is ominous of evil. The Danube is a fatal river. It is singular that in the Russian songs, unlike those of their neighbours the Servians and the Slawaches, and of almost every other rude nation, there is no mention made of the ghosts of the departed, or of spiritual appearances of any kind. Occasionally, indeed, the name of a pagan god is invoked, or a raven or other animal utters prophecies, but this is the only approach to the supernatural in their national songs; yet the Russians, like all other Slavonian tribes, are highly superstitious, and in their popular tales we find abundance of enchanters and ghosts. It is difficult to account for this paradox, unless we suppose the Russians to have derived their superstitious notions from the traditions of other nations, which had not time to become naturalized in the popular poetry. Perhaps, too, the imagination of the Russians is less creative. Melancholy is the dominant feeling in their songs; and it is astonishing how powerful its expression is in their rudest songs. A Russian author, Gramatin, is of opinion that this presiding tone was given to Russian poetry during the long oppression of the Tartars, and there is no doubt that the Russians were at that time under lamentable bondage. The Russian popular songs of the present day are not very old. About sixty years ago a collection of national ballads was formed, none of which, however, could be traced to an earlier age than the first Tzar of the house of Romanof; several of these seem echoes of older song.

[33] Among these works containing the only historical notices of the times, are the annals, written in the old church language, by Simon the Saint, who died in 1226; a book by the metropolitan Cyprian, who died in 1406; and the Sophia Chronicle, or Russian annals from 862 to 1534, of which there is a new edition by Strojef in 1820-22. These books and the Romantic histories of Alexander the Great, the Roman emperors,

the days of Peter the Great, Russia had remained almost completely insulated from the civilization of Western Europe. The art of printing exercised comparatively little influence in this country, being kept under the exclusive management of the church. It is about the 16th century that the first dawnings of dramatic art appear in Russia, in the representation of Religious Mysteries by the students of Kief, who went about the towns for that purpose during the holidays.[34] An improvement on these rude efforts of the Thespian muse, were the Slavonic-Russian dramas of the monk Simon of Polotsk, which, in the time of Feodor III. were performed first in the convent, and subsequently at court. The first foreign comedy which was translated into Russian, was Moliere's *Medecin malgré lui*, which was performed by the Tzaritza Sophia Alexiofna and the ladies of her court. The Poles were early regarded as models even in poetry. In 1680, monk Simon translated the Psalms of David. As we have already said, the written language of literature early differed from the spoken dialect. Some notices in Procopius, and a few disfigured names which occur in Byzantine history, appear to indicate an ancient language common to all Slavonian tribes. This language itself no longer exists; but recent philologists have attempted to trace the features of the old in the modern dialect. The existing Russian dialect differs little from that spoken about the time of the foundation of Novogorod, as is proved by ancient monuments and commercial treaties of the 10th and 11th century. The introduction of Christianity by foreign monks added a number of foreign words to the vernacular language. The Mongols and Tartars likewise introduced many barbarisms, and another importation of foreign words took place under Peter the Great. In this manner the ancient learned and church language, as used in the translation of the Bible by Cyril in the 9th century, or the Slavonian as it is called in Russia, came to differ widely from the spoken dialect of Russia, which is intermixed with Mongolian, Tartarian, Polish, German, and French words and idioms. The introduction of a current system of writing, by which the heavy characters, introduced by Cyril, and borrowed partly from Asiatic alphabets, were dispensed with, greatly contributed to the progress of letters. At the end of the 17th century, Elias Kopoievitch introduced various improvements on the Russian characters: and their form has within the last ten years been rendered still more elegant.

Modern Literature.] Peter I. in giving the first social impulse to Russia, also prompted the first advances towards scientific civilization. The work commenced by him was carried on by his daughter Elizabeth and her minister Ostermann, and particularly by Catherine II. There are now few branches of human knowledge to which Russian scholars have not approached; but it is yet in those arts and sciences which precede the prime time of a nation, that Russian authors and artists are distinguished. Severe sciences belong not to the present age of Russian literature. Greece had a Homer before Plato; Rome, a Plautus and Terence before Seneca. A lively fancy and an energetic language, have produced several distinguished poets in this country. The names of Lomonossof

and Antony and Cleopatra, were the only literature of the early ages. But as their authors disdained to write in the corrupted common language, and used only the ancient Slavonian, even these few books were of difficult access to the people.

[34] It will afford some insight into the state of the public taste at this period to mention, that the scenes where Ataphernes cuts off the head of the king, the execution of Haman, and that of the Three Children in the fiery furnace, were the favourites.

and Sumarokof shed a lustre on the annals of Elizabeth and Catherine. Karamsin, Scheraskof, Dmitriev, Bogdanofitch, and Derschavin, the present Choryphaeus of Russian poetry, are esteemed throughout Europe; Elgin has caught the spirit of the great British dramatist; and the peasant Feodor Slapusking is the Burns of Russia. Volkof, Voronichin, and Sacharef excel in architecture; Koslofosky, Martos, and Pimemos rise far above mediocrity in sculpture; while painting has skilful professors in Kalbitschef, Ivanof, Tschervchin, and Alexandrof. Only in music and composition, in spite of their love for the art, the Russians fall beneath their models. Their national instruments are noisy in the extreme; and the Russian horn-music, an invention of the year 1757, is still, and we hope will ever remain their exclusive property. In the execution of this unique national music, a great number of horns are employed; some long and straight, others more or less short, and a little curved, but all of the same tone. For a complete horn-band, twenty musicians at least are required; but forty would not be sufficient, as there are ninety-one sounds in all, if some of the performers, having little to do, were not able conveniently to attend to more than one horn at a time. Some of these instruments descend lower than the common horns; and the sounds are thus rendered more tremulous, and more forcibly affect distant auditors. This music, barbarous as it certainly is in conception, has been brought to such perfection, that the quartettos and quintettos of Haydn, Mozart, and Pleyel, may be performed with it, with admirable precision and celerity. The strong, though pleasing rest on the slow and dying notes, produces a very fine effect in the pathetic passages. Their popular airs are generally plaintive, and in a minor key; their dancing and drinking songs are brisk and lively. Their music is chiefly vocal, and is seldom accompanied by any instrument. The national instruments are the *gussla*, a species of harp; the *balalaika*, a species of guitar, with only two chords; several kinds of flutes; and a species of bagpipe, called *volynka*, which is a favourite instrument among the Finnish tribes. Their vocal church-music, notwithstanding the encomium of Paesiello, is ill adapted to devotional purposes. They have a number of respectable historians. The works of Tatischtschef, Schtscherbatof, Tschulkof, Elhilkof, Norvokof, and Karamsin, are worthy of translation into every language, on account of their historical fidelity. Pleschtschef, Säblofsky, and Tschubataref, are eminent in geography and statistics. The travels of Sarytschefs, Rytschkofs, Oserezkofskij, Maximovitch, Ismailof, and Suvarokof, are highly interesting works. Mathematical science is fondly cultivated in Russia. In chemistry Mussin Puschkin, in natural philosophy Strachof, in natural history Lepechin, and in mineralogy Severgin, are eminent. Pravikof and Maximovitch have distinguished themselves in legislation. The other fields of human science still lie waste in Russia. In the speculative sciences the Russians are mere empiricists. Their genius has not yet risen to generalization in science, and foreign philosophers are still followed in the most slavish manner in the academies. In 1749, Russia possessed only a single original philosophical work, viz. Solotznitzki's Rights of Nature. A bombastic species of rhetoric usually distinguishes the pulpit eloquence of this country. Russia does not possess an original novel worthy of translation. The array of Russian authors and books is not yet very formidable. In 1787, Backmeister reckoned only about 4000 volumes in this language,—scarcely as many as appears in one year in the Leipsic catalogue. In the largest Russian

library—that of the academy of St Petersburg—Bjeliagef, could, in 1800, find only 2,964 printed national works, among which were 105 novels. But in 1819, there are said to have been 8000 native works. Translations, novels, belles lettres, and dramatic literature, form the staple of Russian literature. Newspapers are established not only in the capitals but also in some provincial towns. There is a literary gazette published at Moscow in the Russian, and another at Wilna in the Polish language. In 1805, the whole empire had only nineteen periodicals, and three newspapers. The number of Russian authors of any note is about 400, of whom about 340 are living authors. The eighth part of those are clergymen, the greater part noblemen."[5] Moscow is the chief seat of Russian literature. In no part of the Russian empire is the native language spoken so purely as in this city and at Novogorod. Petersburg is the emporium of the plastic arts, which flourish there under the immediate protection of the most magnificent court in Europe and the academy of arts. The Russian academy of sciences has numbered Euler, Pallas, Frank, Gmelin, Georgi, Storch, Strutter, Fuss, Kraft, Lovitz, and many other highly respected names, among its members.

Printing-Offices.] In 1674, the two first printing-offices were established in Kief and Moscow. One century afterwards, there were 16 presses throughout the empire, exclusive of Livonia; and in 1803, 49—of which 14 were established at Petersburg. Some of the higher tribunals and universities have also their own printing-offices. Yet the whole vast empire has not as many presses as the single town of Leipsic; even in some large governments, such as Perm and Finland, there is not a single bookseller's shop. The importation of foreign books is only allowed under great restriction; and the censorship of the press, though not quite so severe as formerly, continues an oppressive fetter on the advancement of Russian literature.

Establishments for Education.] Till very recently, popular education in Russia was wholly in the hands of the ignorant clergy. The only existing universities, viz. those of Kief and Moscow, were not sufficient to supply the wants of the age, and were in truth rather ecclesiastical seminaries, than places of secular instruction. The youths destined for other professions than that of the ministry were necessitated to seek their learning at foreign universities, and the children of the nobles were educated by foreign tutors, while no attention whatever was paid to the education of the lower classes. The commission for schools, established by Catherine, was intended to remedy these evils, which had then become very glaring; but the political circumstances of the times opposed the execution of her plans, and they were not carried into effect till Alexander mounted the throne. A new era in the history of Russian civilization commenced with the accession of that monarch. Since 1802, the instruction of the people has always formed an important branch of the administration. An effective ministry has been established for popular instruction. Under its direction, new universities and schools have been erected throughout the empire, all of which have been liberally endowed. Certainly no State in the world has ever appropriated such a proportion of its revenues for public instruction. In 1804, the crown paid for the

[5] The number of living authors is very considerable when we consider the small encouragement which is held out to literary labours in Russia. Dr Lyall informs us that the sale of 200 or 300 copies of a book in Russia is a thing almost without example. *Karamsin's History* is by far the most popular work ever printed in Russia; and yet the total number of purchasers for the first edition was 406!

support of 994 organized establishments for instruction, not less than 2,753,351 rubles.

The Russian educationary establishments may be divided into three classes, viz. General, Particular, and Theological.

General Establishments.] The general establishments, with the exception of the parochial schools, are all supported at the expense of the State; and are placed under the inspection of six directories, of which the superior management is committed to the curator of each university, and to one imperial commissioner. In 1804, there were 494 universities, gymnasia and district-schools, with 1,425 teachers, and 33,484 pupils. Since that period this number has not greatly increased. In 1813, there were 503 establishments for instruction, with 1,505 teachers. There are seven universities in Russia, viz.:—

1*st*, That of Moscow, with five faculties. In 1804, there were 25 professors in this university, but only 63 students, a fact sufficiently indicative of the little attention given by the people to the means of instruction. This district, at that period, embraced 110 schools. 2*d*, The university of Petersburg has been only fully organized since 1819. To this district belong 71 schools. 3*d*, Wilna, embraces 132 schools. 4*th*, Dorpat, 82 schools; 5*th*, Charkof, 47; 6th, Kasan, 52; 7*th*, Abo, founded in 1812, superintends all the schools of Finland. For the support of each of these universities, 130,000 rubles is set apart.

There are fifty-one gymnasia in Russia, the capital of each government possessing one of these seminaries, at which the young people are prepared for the university.

The district schools are placed under the special inspection of a director, and limit their instruction to that knowledge which is absolutely necessary for every well educated citizen.

It is intended that every parish, or at least two of them together, shall possess and support a parochial school. In the villages of the crown, the minister for education, and on the estates of the nobles, the proprietor, but always under the control of the directors of the district, has the management of those schools, in which the children are taught the necessary branches of education, and prepared for the district schools.

Particular Establishments.] The inspection of the particular establishments is, with a few exceptions, intrusted to the director of the university. Under this head is the Demidof school of higher sciences at Jaroslav, and the Lyceum at Zarskoje-selo. 2*d*, The pedagogical institute for the education of popular teachers, of which there is one at Petersburg, one at Kisljar, and several in the universities. 3*d*, The medical institutions, embracing the Medico-chirurgical Academy at Moscow, the institution of midwifery, and the veterinary schools at Petersburg, Moscow, and Lubny. 4*th*, The Midwifery and Clinical Institutes at Bialystok. 5*th*, Technical schools, embracing the schools of mining at Petersburg and Ikaterinburg; the schools of forests at Zarskoje-selo and in the forest of Kaluga, and the school of agriculture at Uxoronofo. 6*th*, Institutions for the education of the nobility at Grodno, Revel, Ostrog, Twer, Moscow; and for the imperial pages in Petersburg. 7*th*, Military schools, marine schools, commercial schools, and schools of industry, at Petersburg. 8*th*, Establishments for female education belonging to the benevolent establishments of the empress-mother, and standing under her particular inspection, of which there are two at Petersburg and two at Moscow. 9*th*, The Gymnasium for higher

sciences, at Neskin. 10*th*, The Ilenski Institution for the deaf and dumb at Romanova. 11*th*, The Theatrical School at St Petersburg. 12*th*, The boarding schools in Petersburg and Moscow are chiefly under the management of foreigners.

Theological Institutions.] The Grecian clergy receive their first education in the Theological Academies at Kief, Moscow, Kasan, and Petersburg, and at 36 eparchical seminaries, and 115 inferior schools, which cost government annually nearly 400,000 rubles. The Armenian clergy study in the convent of Nachitschevan. The Protestants receive their first instruction in the general schools, and finish it at the university of Dorpat. The Catholics study in the colleges of Minsk, Polosk, and other places, which are no longer under the management of the Jesuits, and in the General Seminary at Wilna and the ancient university of Olyka. The Mahommedans are instructed in particular schools by their own metschetes. The principal Tartar schools are at Kasan and Tobolsk. The Jews have, besides their ordinary schools, a celebrated national institution at Brzesc. For the Mongols and Calmucks, there are Lamaitic schools; and at Kasan there is a school for foreign tribes. However, it may easily be conjectured that within the limits of this empire many tribes are wholly destitute of the means of instruction.

Literary Societies.] The principal literary societies of this empire are:—The Imperial Academy of Sciences at St Petersburg; the Imperial Academy, and another society for the improvement of the Russian language; the Society of Russian History and Antiquities at Moscow; the Medico-Physical Society, and the Society for Agriculture and Mechanics, in the same place; the Economical Society of Petersburg; the Petersburg Society of Literature and Taste; the Literary and Economical Society of Riga; the Medico-chirurgical Society at Petersburg; a Society for Russian language and literature at Shitomir; the Agricultural Society at Abo; the Imperial Mineralogical Society at Petersburg; and the Academy of Arts in that city.

CHAP. VI.—CONSTITUTION AND GOVERNMENT.

The Autocrat.] RUSSIA is an absolute hereditary monarchy, governed by an emperor, whose title is, 'Emperor and Autocrat of all the Russias.' No form of government in Europe approaches nearer to Asiatic despotism than that of Russia; whose chief ruler is limited by a few arbitrary customs, revered only for their antiquity; whose person is sacred; and who divides the chief legislative and executive power with no other person or body in the empire. He alone is the chief of the legal and ecclesiastical establishments; he is accountable to none; he possesses the right of declaring war or making peace, levying taxes, raising recruits, granting privileges, titles, and dignities, constituting or abolishing monopolies, directing the regalia, and managing the whole estates of the crown. The succession descends from father to son in the male and female line, according to primogeniture. Birth alone raises the monarch to the throne of Russia; he requires not to come under any promise or take any oath, although the coronation and anointing at Moscow are regarded as sacred customs. The oath of allegiance by the provinces, though not looked upon as necessary, is always exacted. A fundamental law of the empire

declares that the ruler of Russia must be of the Greek church, and even his wife is bound to embrace the same religion at least at her marriage. Hitherto, the children of a bondswoman might have succeeded to the throne; but Alexander's law of the 20th March, 1820, declares that none but the children of a princess shall be eligible to the succession. The imperial residence is at Petersburg, and occasionally at Moscow. The arms of the empire is a double black eagle with two heads and three crowns.

The Nobility.] By a regulation of Catherine II., in 1785, the nobles are divided into six classes, which, however, form but one single corps: these are, the real nobles, who can trace their nobility back a century; the military nobility; the eight-class nobility, or those belonging to the first eight degrees of rank; foreigners, or those descended from noble foreign families; families honoured with titles, such as prince, count, baron; and the ancient noble races, whose nobility is undoubted, though its origin is covered with obscurity. The nobility of the empire is very numerous and daily increasing by descent, service, foreign diplomas, &c.

The nobles of the empire, whatever may be their rank or class, possess the sole right of purchasing land, except in some places beyond the frontiers of Russia Proper. Peter I. confirmed, and even the enlightened Catherine II. augmented privileges which were already by far too great. She commanded the colonels of regiments, in their promotions, to give a decided preference to those of noble rank. She ordained that the children of nobles should, in preference to all others, be admitted into the academies appointed for military education; and that, to this class, should belong the exclusive privilege of erections for the distillation and sale of brandies from grain. All nobles, from the prince to the baron, are upon an equal footing, and enjoy equal privileges. Their lands are exempt from taxation, and their persons from military ballots and corporal punishments. Their slaves—which are, probably, the most valuable portion of their possessions—are, however, liable to the capitation tax, and to military service. Russian titles are not less numerous than among the nobles of other countries; but, as has been already mentioned, these titles confer on such as possess them no influence independent of military rank. The nobles, however, evidently possess many advantages with regard to the attainment of that rank. Every individual, indeed, must proceed through every gradation, beginning with the station of a private; but the partiality on all occasions evinced towards the nobles, hurries them on to the highest offices before they be qualified for service; and noble corporals and sergeants may be frequently seen in the arms of their nurses!

Freemen.] The order of merchants and other freemen, has been but lately known in Russia. Before the time of Peter I. the Russians might, with propriety, be divided into nobles, clergy, and peasants, or, more properly, slaves. Peter's sagacity soon perceived how much the happiness and stability of a State depend upon that middle class, consisting of merchants and tradesmen, who enjoy a rational freedom, and rely for advancement only on their own exertions and ingenuity. It would have been a dangerous step all at once to emancipate the slaves which were found in every part of his dominions: he therefore made such regulations as tended gradually to create a class of freemen. Peter, however, stopt short in this measure, the privileges of freedom were confined to certain cities; but Catherine II. gave a latitude to the regulations for the creation

of freemen which rapidly augmented their number. The freemen in the Russian empire are divided into merchants, burgesses, and other freemen. The merchants are subdivided into such as have a capital of about 60,000 livres; such as have a capital of about 50,000 livres; and such as have a capital amounting to any sum between 50,000 and 3000 livres. Burgesses are the inhabitants of free towns, who possess a capital not amounting to 3000 livres. The other freemen are slaves who have been freed by their masters; such as have obtained liberty from the army or navy; members of the Academy of Arts, and other similar institutions; the children of freemen; and the orphans of the Foundling Hospital.

Peasants.] The fourth order of men in Russia consists of the peasants, who are literally the slaves of their proprietors, being bought and sold with the soil which they cultivate, and on no account permitted to leave the spot on which they were born unless it be to recruit the army or navy. The enlightened policy of some late sovereigns has already altered their condition much for the better. Their admission into the rank of freemen has been facilitated; and consequently they give daily accessions of strength to that order, which, sooner or later, will become the preponderating class in society. All the peasants on the crown-lands had their freedom bestowed on them by Alexander I.; an example which has been already followed by several of the nobility. Peasants may become free by the grant of their masters, or by purchase; but some proprietors are careful to keep them in such a state of poverty, that the latter mode of obtaining freedom can seldom be exercised. The most common mode by which a peasant obtains his freedom, is by entering into the army or navy; for the moment in which he is enrolled, he is released from his proprietor, and after his discharge he retains his freedom.

Administration.] The administration of this vast empire is uniform and entire, all the wheels working together as parts of one vast machine. The superior direction of the whole is concentrated in the person of the Emperor himself, who consults at his pleasure his Privy Council and Ministers. The Senate forms a medium between the ruler and the ruled in the administration of justice, and the Synod in matters spiritual. By these organs the Emperor intimates his will to the provinces. What the monarch is to the State, each governor is to his province; and the tribunals of the latter supply the place of the Senate and Synod to the former. The whole of Russia is divided, with the exception of the lands under its protection, and the colonies, into 51 governments and 3 provinces, of which 37 have an uniform constitution. Each of these provinces has a military and civil governor; sometimes both offices are united in one person, and sometimes two or more provinces are united under one military governor. The governments are subdivided into circles or districts. To the civil government of each province belongs, besides the governor, a council of government, a tribunal of criminal justice, a civil tribunal, a court of equity, a chamber of finance, and a chamber of general internal economy. The Cossacks, the Calmucks, Bachkirs, Mongols, and some others, retain a shade of their ancient constitution. With the internal government of the Kirghissians and Circassian tribes, the government only interferes so far as to confirm the nomination of the Khans, and to receive an annual tribute. The high tribunal of the empire is the Council of State, of which the Emperor is chief president. It consists of 35 members, including the ministers; and is divided into the four departments of legislation, military affairs, civil and church affairs, and

interior political economy and finance. The Ministry consists of the departments of home and foreign affairs, war, marine, public instruction, finances, justice, police, engineering, architecture, and religion. It has been usual to describe the Russian Senate as a representative body; but for no other reason certainly than that it bears the name of Senate. The members of that body are named by the Sovereign, paid by him, and removable at his pleasure; and have, in their collective capacity, none of the elements of a representative body. Besides it is evident, that a tribunal, the business of which is to judge in civil and criminal affairs, to take cognizance of, and to publish the ukases of the Emperor, and to control in one of its sections only the accounts and contracts of some of the functionaries of the Government, has in its nature no concern with the ordinary affairs of the internal administration, or with the alterations and improvements of which it may be susceptible. The first are confided to a committee of the Ministers, which sits at St Petersburg. As for the plans relative to the administration, and measures to be adopted on important occasions, the discussion of them is reserved to the Council of State, called also the Council of the Empire, when the Sovereign is pleased to ask the advice of its members. This Council is also a Court of Appeal, to decide, in the last instance, on causes already brought before the Senate, when the decision has not had in its favour two-thirds of the votes, or when the Emperor orders them to be reconsidered. Yet neither the Council of the Empire, notwithstanding its high rank among the public functionaries, nor the Senate, have the smallest share in the deliberations on matters relating to foreign policy, which depend exclusively on the will of the Sovereign. The Holy Synod, the highest tribunal of the Russo-Greek church, exercises its power in name of the Emperor, and holds its bureau in Moscow. The members consist of the metropolitan, an archbishop, a bishop, the confessor of the Emperor, an archimandrite, high priest, attorney-general, and several secretaries.

Laws.] A very imperfect code of laws for the empire was promulgated by the Tzar Alexis I. in 1649. Since that time it has been so augmented by ukases, that the additions are bulkier than the code itself; and no regular digest having been attempted, the age of a man would not suffice to gain a perfect acquaintance with it. However, the decisions of the tribunals are founded on these laws and the decisions of the Senate. In some German and Polish provinces, they proceed on provincial law. Catherine II. attempted to revise the code. Alexander's commission is still at work upon it. The barbarity of ancient times, everywhere visible in the old code, has been greatly softened; torture and the punishment of death are entirely abolished; crimes are punished by corporal punishment, fine, imprisonment, church-censure, and banishment to the mines. The knout and slitting the nose are only executed on the lower classes.[36]

[36] There are three instruments for whipping in use in Russia; two of which resemble a cat-o'-nine tails, and the *knout*. "One morning," says Mr Coxe, "as I was casually strolling through the streets of St Petersburg, near the market-place, I observed a large crowd of people flocking to one particular spot. Upon inquiring of my Russian servant the cause of this concourse, he informed me, that the multitude was assembled in order to see a felon, who had been convicted of murder, receive the knout. Although I naturally shuddered at the very idea of being a spectator of the agonies of a fellow-creature, yet, my curiosity overcame my feelings. With the assistance of my servant I penetrated through the crowd, and ascended the roof of a wooden house of one story, from whence I had a distinct view of the dreadful operation, which was already begun. The executioner held in his hand the knout. This instrument

There is no allowance set apart for the administration of justice. No fees are known before Russian tribunals; but justice is impeded by the number of formalities. Since 1803, sentence has been always passed with open doors.

The Ecclesiastical Constitution.] The Russian church, considering the independence of the four eastern patriarchs, is a distinct national church. The synod presides over the clergy and consistories. These latter are each presided over by an Archijereis, who forms with his consistory, an eparch. The secular clergy consist of Archijerei, comprehending metropolitans, archbishops, and bishops, to whom have been added the Katalikos of Georgia. The inferior clergy consist of Protojerei, Jerei, and Diakons. The regular clergy are divided into Archimandrites, or chiefs of several convents, Igumenes or priors, Igumeniasti or prioresses, monks, nuns, and anchorites. The convents have, however, been greatly restricted of late; their present number may amount to 480 monasteries and 70 nunneries. The whole Russian empire is said to contain about 26,747 Greek churches, and the number of the Greek clergy has been estimated at 67,900. Perhaps those numbers are beneath the truth; for the smallest village in Russia has its church, and the towns are overstocked with them. In 1796, the total number of clergy throughout Russia was ascertained by census to be 211,300, of which three-fourths at least must have belonged to the Greek church. The priests are generally paid by the government, the State having in 1764 confiscated the lands of the church to its own use. The great body of the country priests are ignorant in the extreme; few of them are capable of doing more than repeating or singing out the prayers of the church. They are allowed to marry only once in their lives, and the wife of a priest must not be a widow. Their sons are devoted exclusively to the service of the church, but the Archijerei are not allowed to marry. There are about 72 different sects of seceders from the Greek church, or *raskolniks,* amounting in all to about 300,000. Bible societies were extensively established in this empire under the patronage of Alexander, but they were abolished by ukase of the new emperor. Within these few months, however, a Protestant Bible society has been patronised by the emperor and the nobility. With the Catholic church is united a part of the Greeks and Armenians in the Polish provinces, under the name of the United Greek and Armenian church, which does not acknowledge the authority of the Pope, but is governed by a consistory established at Petersburg. The Lutheran church predominates in Finland, Livonia, Esthonia, and Courland. At the head of this church is a bishop, whose residence is Petersburg. The Reformed church has few adherents in Russia. The Armenian church has one archbishop at Astrachan. The Moravians have

is a thong about the thickness of a crown-piece, and about three-fourths of an inch broad, and rendered extremely hard by a peculiar kind of preparation: it is tied to a thick plaited whip, which is connected by means of an iron ring with a small piece of leather, that acts like a spring, and is fastened to a short wooden handle. The executioner, before every stroke, receded a few paces, and at the same time drew back the hand which held the knout; then, bounding forward, he applied the flat end of the thong with considerable force to the naked back of the criminal, in a perpendicular line, reaching six or seven inches from the collar towards the waist. He began by hitting the right shoulder, and continued his strokes parallel to each other quite to the left shoulder; nor ceased till he had inflicted 333 lashes, the number prescribed by the sentence. At the conclusion of this terrible operation, the nostrils of the criminal were torn with pincers; (this horrible part of the punishment has been abolished by an ukase dated Jan. 27, 1818,) his face marked with a hot iron, and he was reconducted to prison, in order to be transported to the mines of Nershinsk in Siberia."

a community at Sarepta, and various members in the Baltic provinces. The Mahommedans are only in part followers of the Koran; the Kirghissians are only nominal votaries of Mahommed. They are governed by two Muftis. The Jews are Talmudists and Karaites, and protected by ukase of 9th December, 1804. They have their own synagogues. The Lamaites exist among the Nomade tribes. Their principal temple is at Darsan, in the Asiatic circle of Udinsk. They have numerous priests. The Hindoos have their own place of worship and dervishes at Astrachan. The Shamans exist in several Siberian tribes, all of whom believe in magical incantation.

The Army.] The Russian army, in 1820, is said to have amounted to 989,117, viz.:—613,722 infantry; 118,141 cavalry; 47,088 artillery; 27,632 extra corps; 105,534 irregular; and 77,000 troops in garrison. Thus Russia possesses a greater military force than the united powers of Austria, Prussia, and France. However, on account of the enormous extent of the empire, one half of this gigantic force is occupied on the frontiers, so that Russia can never throw its immense physical weight upon one point.[37] Besides the regular army, there is a yeomanry force, which, with the exception of Siberia and the two most southern boundaries, has been established since 1807 in all the provinces, and acts partly as a

[37] Mauvillon's *Militar Blatter* for 1826 contains the following interesting article on the state of the Russian and Polish armies at the epoch of the death of the Emperor Alexander:—

"The distribution of the Russian and Polish armies presents the picture of an army in order of battle. Fronting the west there is—

1. The *Advanced Guard* of this army, which is formed by the Polish army and the corps of the army of Lithuania, and presents a mass of 80,000 combatants, commanded by the Grand Duke Constantine. No European army can be compared to it in respect of mechanical instruction. Dispersed in cantonments of about 150 leagues in length from Lovitch to Minsk, and of 146 in breadth, between Kovno and Dubno, it can be concentrated at Warsaw, or at Brest-Litovski, in less than three weeks.

2. The *Army of the Right*, may be considered as composed of a *corps d'armée*, cantoned in Courland and in Livonia, of the corps of the Guard, and of the first corps of the cavalry of reserve. These different corps united, likewise form a mass of 80,000 combatants. These troops are, perhaps, the only ones, which, in respect of mechanic perfection, rival the army of the Grand Duke Constantine. Their cantonments extend from Molangen to Pieskof, about 132 leagues, and from Revel to Vilkornirsz. At the utmost 18 days are necessary to assemble them upon the Niemen.

3. The *Army of the Left*, called the *Second Army*, is also formed of a mass of 80,000 combatants, cantoned in the Chersonesian Governments. The greatest length of its quarters, from Khokzym upon the Pruth, to Tcherksaski upon the Dnieper, is about 106 leagues; and the greatest breadth 180 leagues, between Machnovka, near the southern frontier of Volchin'a and Simpheropole, in the Crimea. Nearly three weeks are necessary to concentrate this army on the Pruth.

4. The *Army of the Centre*, the *First*, or the *Grand Army*, presents a mass equivalent to the three preceding armies, consequently of 240,000 combatants. The cantonments of this army extend, on one side, to more than 234 leagues, *i. e.* from Kazin, upon the frontier of the governments of Twer and of Yaroslaf, to Saratof, and, on the other side, to more than 320 leagues, from Ostrog to Murom, upon the frontier of the Governments of Vladimir and of Nyshni-Novogorod. Six weeks, at least, are required for concentrating the grand army in Volhynia.

Besides these four armies, 480,000 men strong, Russia has many detached corps, which amount to more than 267,000 men. The whole of the armed forces of Russia are, therefore, included in the following summary:—

	Men.
The four Armies,	480,000
The detached Corps of Finland, of Orenburg, and of Siberia,	45,000
The Corps of the Caucasus,	85,000
The Military Colonies,	67,000
Garrison Troops,	70,000
	747,000

To these, let us add the *hordes* of the Kirghissians and of the Baschkirs, and we shall have an idea of the military state of the Russian empire."

national guard and partly as a reserve. The rapid increase of the Russian army is very remarkable.

Peter I. as Tzar, had, in	1687,	10,000	regular troops.*
——— as Emperor, ...	1724,	108,350	...
Elizabeth, ...	1747,	162,750	...
Catherine II.	1771,	198,107	...
———	1786,	263,662	...
Paul I.	1800,	368,715	...
Alexander I.	1805,	428,287	...

The army is maintained by conscription; the legal term of service is 25 years. The annual expense of the military amounts to at least 20,000,000 of rubles. The average pay of the ordinary troops may be estimated at $1\frac{1}{3}$d. per diem. In addition to this, however, the Russian soldier is furnished with lodging, and 150 lbs. of meal, and 44 lbs. of salt annually. This sum appears exceedingly small when compared with the pay of a British soldier, not exceeding one-eighth of his daily pay; but as money is a scarce article in Russia, and the wants of its inhabitants are comparatively few, its relative value is much greater. The uniform of the infantry is green, with white waistcoat and breeches; of the cavalry, blue; of the engineers and artillery, red. The Cossacks, Baschkirs, and other irregulars, receive no pay, being furnished with lands by government, by the produce of which they are supported. They supply what amount of irregular cavalry may be judged necessary, at their own expense, and have the choice of their own commanders.

Military Colonies.] Shortly after the conclusion of the late war, the Emperor Alexander conceived the design of reducing the expense of a standing army by establishing military colonies. General Arakschejeff drew up the plan of these establishments. He advised military villages to be built and placed under a particular code of laws, the male population of which should be trained to arms, and form the reserve of the Russian army. Hitherto, on account of the immense extent of the empire, the Russian conscript was often separated during the best years of his life from his native home, and all that could inspire him with patriotic feelings. By this scheme it was designed not only to provide for the soldier's family when the father was in the field, and to supply the latter with a strong bond of attachment to his native soil, but to concentrate a formidable military power along the frontiers of Poland,

* On these statements Dr Lyall makes the following remarks:—" The above is one of the fairest, and, at all events, least exaggerated, estimates I have seen of the Russian army, and, I believe, is not far wide of the truth in most of its statements. The heterogeneous composition of this army, its wide dissemination, and the difficulties of assembling its various corps, (which are much greater than the author of the above estimate, who only takes *time* into the account, imagines)—the want of the '*sinews of war*,' the precious metals—and the inherent weakness of the autocratic government, only, are some of the drawbacks from its nominal strength. It even seems doubtful whether Russia could, at the present moment, assemble 300,000 well-disciplined troops on any enemy's frontier, within six weeks; and it may be questioned whether 400,000 troops of her whole army be properly organized. Under the head '*corps of the Caucasus*,' is to be understood the Caucaso-Georgian army, which is cantoned on both the north and the south sides of Mount Caucasus, and also partly scattered among its Alpine passes. This army appears to be overrated at 85,000 men. The latest intelligence I have received makes it only about 60,000. There cannot be a doubt that the number of military colonists was above 67,000 at the time of the death of the Emperor Alexander. But a week ago, in an Evening Paper, I estimated it at 150,000 or 160,000 souls. In this number, however, I include the *regular troops*, which were sent to train the peasants, and which are domiciled among them, the reserve, the *Cantonists* from 13 to 17 years of age, and the *boys* from 8 to 13 years of age. Perhaps, in the German estimate, the peasants alone were numbered."

Turkey, and the Caucasus. Accordingly an imperial ukase was issued, fixing the villages in which military colonies were to be established. A certain number of the peasants of the Crown were established in these villages as chief colonists, and on each peasant a soldier and his horse was quartered, whom the peasant was bound to support, receiving in return the services of the soldier in the management of his house and spot of ground. The eldest son of each peasant was to succeed his father in the heritage; but the second and third sons were to be obliged to enter the military service. Boys were to enter military schools at the age of eight; and at seventeen were to be received as colonists. After 20 or 25 years' service the military colonist might retire from service. Each colony was to be governed by its own tribunal, of which the commanding officer was to be president. The idea of a self-supporting colonized army of millions of soldier-agriculturists was gigantic, and the projected system assumed a stupendous aspect to the politicians of Europe. But it did not approve itself to the Russian people. It was held in utter abhorrence by the peasantry; it was detested by the regular army to such a degree, that officers of high rank could only be induced by considerable promotion and high pay to attach themselves to colonized regiments; nor did the nobility approve of the scheme, justly regarding it as highly dangerous in the event of a popular leader appearing in the south, who might in the case of a difference with his sovereign, easily place himself at the head of several hundred thousand men. Yet, notwithstanding the general unpopularity of the system, Alexander vigorously prosecuted his design; and in 1824 Russia had along her western frontiers, from the Baltic to the Black Sea, in the governments of Cherson, Novogorod, Charkof, and Ekaterinoslav, a line of military colonies containing 400,000 men, destined to form the stock of her standing army. But it appears from the report of Count Arakschejeff, which was published at St Petersburg in the end of the year 1825, that the advantages which were proposed in the establishment of those colonies have not been obtained. It was calculated that they would increase within themselves sufficiently to render any other mode of recruiting unnecessary. But the mortality among the sons of the soldiers has been so great, in comparison with the births, that Count Arakschejeff was obliged, in order to complete the regiments, to take soldiers' children from the Crown villages, or from villages belonging to other proprietors. But where would children be found if the whole army were colonized and the conscription abolished? We see farther, from the report, that of the 15,061 males, and 12,670 females composing the northern district, only 4,751 have not become a burthen to the government. Consequently the government has had to provide for 23,251, instead of for 6000, which was the utmost number provided for. Thus about six-seventh parts of these military colonists do not support and maintain themselves, as it was expected they would do. On the contrary, the government must find support and provisions for the colonized battalions, as well as for those on service, and at the same time provide for the other indigent individuals, of whom there is a constantly increasing number in these settlements. It may therefore be assumed, that if of the 600 battalions of the Russian army 200 were settled, the remaining part would cost much more than all the 600 would have cost. To this must be added the expenses of the first establishment, and the loss in the annual revenue. It is said that every colonized regiment costs the State five millions of rubles annually; this would make

for 200 regiments the enormous sum of 1000 millions of rubles. But if we take only the half, the sum will still be very large. If the plan were to be executed to its fullest extent, the colonization would include three millions of individuals. Each of these pays the government a poll tax, which on an average may be estimated at eight rubles at the least There would therefore be an annual loss of 24 millions of rubles, not to mention the diminished amount of the brandy distilleries, and many other branches of revenue, as this colonization reduces the peasants to poverty. Such great sacrifices were certainly not contemplated when the idea was suggested to the late Emperor. It would appear, however, that Nicholas is determined to prosecute the design at all risks. In a late rescript addressed to the general-in-chief of the military colonies, he directs the latter to use every endeavour to fulfil the "beneficent projects" of the Emperor Alexander, in as far as regards these establishments. It has been well-remarked that the military colonies of Alexander will ere long take their place with Napoleon's beet-root sugar and continental system; hence the more speedily they are abandoned the better for Russia.

The Navy.] In 1813 Russia possessed 32 ships of the line, 18 frigates, 6 cutters, 7 brigantines, 54 smaller vessels, 25 floating batteries, 121 gun-boats, 63 yawls, and 80 falconets—amounting in all to 289 sail, mounting 4,348 guns, and manned by 32,046 sailors. It has been justly remarked, that if a fleet consisted of rigging and hulls only, that of Russia would soon equal the fleet of any other nation, as that extensive empire contains within itself every naval material; and even furnishes other powers with a great portion of such materials. To whatever cause it may be owing, whether to the comparative freshness of the Baltic waters, or to the inferior nature of the timber used, or the different mode in which it is prepared, it is certain that a Russian ship cannot endure sea service above six years without needing repairs; and is unfit for it in fifteen years. This is a great obstacle in the way of Russia becoming a formidable naval power. But other obstacles still more formidable exist, of which the principal is her comparatively small extent of sea coast. The Black Sea, those of Azof and the Caspian, are entirely inland seas, two of which are yet but in part possessed by Russia, and the coasts of which are inconsiderable compared with those possessed by the European powers. The only sea-port which can be said, on the European side, to be open to the ocean, is that of Archangel, at which ships of the line carrying 120 guns have been built; but this can never be the station of a fleet which is always to be active. It communicates with the European seas, only by the way of the North Cape, situated in a latitude so high, that, during almost half the year, the passage is prevented by ice. The eastern coasts of Asia are as yet too far removed from the seat of government to be actuated by its energy, and are also frozen several months annually. They are besides too remote from the powers of Europe ever to send forth a fleet which shall be formidable to them. The great bulk of the Russian commerce by sea, is, besides, conducted not by Russian vessels or Russian seamen, but by those of other powers, and by Greeks. The number of Russian sailors are consequently comparatively few, and are rendered still more so by the arbitrary laws of the empire. None can leave the country without a formal passport granted by the proper court. The peasants, who in all countries form the naval and military strength, are considered as being inseparably attached to the soil; and though they may be permitted to join the army,

are yet strictly prohibited from leaving the country. Every merchant who fits out a vessel, must obtain a license to take on board a certain number of Russian subjects, and must ensure their return at the rate of 140 rubles for each. Such restrictions must check the spirit of mercantile adventure, and repress that little ardour which the Russians have evinced in maritime affairs. It is true, indeed, that the arbitrary mandate of the sovereign may soon man a fleet; but the hands thus raised not being acquainted either with the theory or practice of navigation, are utterly unfit to cope with a fleet manned with experienced seamen; and can therefore be no object of dread to a naval power furnished with a sufficiency of hands experienced in maritime affairs. It must also be observed, that Russia has as yet no colonies with which she can maintain any considerable maritime intercourse, and few fisheries which might serve as nurseries for seamen. Her navy, in case of a war with Great Britain, can be completely prevented from leaving the Baltic; and even in case of a rupture with Turkey, not a Russian ship can pass the Bosphorus. The possession of the Bosphorus and Dardanelles might indeed render her a very formidable naval power, and is undoubtedly an important object of Russian contemplation. The expense of the navy, in ordinary, is 9,000,000 of rubles.

Revenue.] It is impossible to determine exactly the revenue of Russia. The government being despotic, no annual statement of its revenues or finances is laid before the public, as in republics, or in limited monarchies. The principal taxes are the capitation tax, and a property tax of not quite two per cent. on the capital of traders. Besides payments in money, the Crown derives benefit from personal services, monopoly of corn, spirits, profits on coinage, postages, stamps, &c. At the accession of Peter the Great, the revenue is said to have little exceeded £1,000,000 sterling, while, at his death it had augmented to £1,500,000 sterling. In Elizabeth's reign it amounted to £3,400,000; and to £4,200,000 at the accession of Catherine II. In 1799, the revenue was calculated at 46,737,394 rubles, or £9,352,478 : 16s. sterling; and in 1811 it had increased to 215 millions of banco rubles, or £12,093,750. The expenses were 266 millions banco rubles, or £14,982,500, or £2,888,750 more than the revenue. In 1826, the revenue amounted, according to M. Balbi, to about 400,000,000 francs, or £16,666,666. Russia has a considerable national debt, amounting in 1826, according to Balbi, to 1,300,000,000 francs, or £54,166,666, and consisting almost entirely of paper currency guaranteed by the crown. To bring this immense mass of paper money to a par with silver, and to establish a sinking fund to liquidate the national debt, is at present the great concern of the Russian government. To facilitate these important objects, and at the same time to promote commerce, a bank was established at the commencement of the year 1818, by the Emperor Alexander, entitled the Imperial Commercial Bank, which is at once a discount and deposit bank.

CHAP. VII.

HAVING in the preceding articles given an outline of the General Geography of Russia, we shall now direct our attention to the Particular Geography of its Governments, commencing with

I. THE PROVINCES OF THE BALTIC.

These provinces, though only united to the empire since the beginning of the last century, come first in order of treatment, as possessing the metropolis. They consist of the governments of Petersburg, Finland, Esthonia, Livonia, and Courland.

Petersburg.] The government of Petersburg is composed of the ancient province of Ingermannland, part of Karelen, and some circles of the ancient government of Novogorod. According to Schubert, it contains 18,401 square miles; and its population has been estimated at 810,000. It contains sixteen towns and six burghs, and except in the absence of the Emperor himself, has no governor. The surface of this province is generally flat; on the N. E. the soil is marshy; towards the south the land rises gently. The climate is cold, moist and unfavourable to agriculture; but corn, hemp, flax, and garden-fruits are produced in considerable quantities. The horticulturists of the capital even contrive to raise ananas, melons, artichokes, and pine-apples. The only fruit reared without protection is cherries; but there is a profusion of wholesome wild berries. The forest trees are chiefly pines and firs. Among the minerals is a species of limestone-marble used in Petersburg for ornamental masonry; granite occurs everywhere.

The Metropolis.] Petersburg, the metropolis of the empire, is situated at the eastern extremity of the Gulf of Finland, in 59° 56′ 23″ north latitude, and 30° 18′ 45″ east longitude; 487 miles N. W. of Moscow, 750. N.E. of Vienna, 525 N.E. of Copenhagen, and 300 N.E. of Stockholm. It is built partly upon the mainland, and partly upon the small islands near the mouth of the Neva, and occupies about 30 square miles, of which, however, the buildings actually occupy only about one-thirteenth. The situation of this most important city has little to recommend it, except its neighbourhood to the Baltic: since the ground is extremely marshy, and so low as to be liable to frequent inundations from the waters of the gulf, and those of the river, which have often threatened the destruction of the city.[38] Before Peter I. had planned the erection of

[38] The most terrible of these inundations occurred in November 1824. On the night of the 10th of that month, so strong a westerly wind impeded the current from the Ladoga Lake, that the Neva and the canals rose to an unusual height, and lamps were hung out around the Admiralty steeple to warn people not to sleep in their lowest apartments,—a signal which custom has familiarized them to. Early on the next day, the waters had so risen, that the white flag was hung out, and guns were fired to admonish the city of its danger. It was soon too apparent that these admonitions were necessary; the Neva rose so as to inundate the whole city, and the confusion and destruction became indescribable. Vehicles of all descriptions, says a private letter, were now seen hurrying homewards, or to the bridges, or to some rising ground, with the water over the wheels; people were also seen wading through it up to their waists; in a short time, only a courier here and there appeared on horseback, their horses scarcely able to keep their heads above the water. At one o'clock on the 19th, nothing was to be seen on the Grand Place and in the streets, but wooden barks, empty boats, sentry-boxes, timber, furniture washed from the houses, bread, and various kinds of provisions, all floating in confused masses on the boisterous surface; wooden houses were seen floating up the river, most of the inhabitants of which had

this city, the ground on which it now stands was only a vast morass, occupied by a few fishermen's huts. In 1703, Peter erected a few wooden houses and a hut for himself, on the island of the Neva, to which he gave the name of St Petersburg. The first house of brick was built by count Galitzin in 1710, and 1711 Peter with his own hand laid the foundation of another house of brick. From this period the increase of the city was rapid, and in a short time it became the imperial residence and capital of the Russian dominions.

Since the time of Peter I. Petersburg has received continual accessions both in size and magnificence. Catherine II. in particular added more to it than all her predecessors. The whole city contains 10,000 houses, with a population of about 270,000 inhabitants, of whom a great proportion are foreigners. The city is divided into five quarters, viz.:—The Admiralty Quarter; the Vassili Ostroff, or island; the Island of St Petersburg; the Wiburg Quarter; and the Foundry Quarter. These five quarters are subdivided into eleven districts; and these again into fifty-five sections, for the purpose of rendering the police establishment more complete and effective. The streets are in general about 70 feet broad, and for the most part well-paved; though some are still laid with planks,—a mode of constructing carriage-ways peculiar to Russia. The houses are usually built of brick, which is covered with stucco so as to resemble stone. M. Ancelot, a very recent traveller in Russia, describes the city when viewed from the summit of a tower or steeple, in the following terms: "Its innumerable roofs, painted in bright green or ash-coloured grey; its gilded arrows, which, when reflecting the sun's rays, appear like so many flashes of fire; those fine gilded domes which crown every Greek church, and appear like an oriental diadem on the brow of this European city; those numerous canals whose waters are seen gliding beneath light and elegant bridges of iron; the thick masses of verdure which, distributed here and there through the city, refresh the eye; the broad and deep river covered by innumerable boats, and the fortress

perished! Even the churchyards experienced an additional desolation. In the Smolensk quarter of the town, the coffins were washed out of their graves, and the dead bodies were cast up from their quiet habitations. Numbers had struggled up pillars, to the tops of the trees, and on the highest eminences, and were gradually saved from the fate of their companions by a few boats, which literally plied above the roofs of many of the houses! An eye-witness says, "On Saturday the 20th, at daybreak, I went out to view the effects of this catastrophe. I found the quay of the Neva blocked up with timber, broken barges, galliots and vessels of various descriptions, which had carried with them the pillars and lamp-posts of the houses, and had broken in the windows, and otherwise damaged the edifices on the quay. The large blocks of granite, of which the parapet is composed, were thrown over. The St Isaac's, the Toochkoff, and summer-garden bridges, were broken away from their anchors, and dispersed and destroyed. Many of the streets were so choked up with their timber, as to be almost impassable. In the Vassili Ostroff quarter, where most of the houses are of wood, the destruction was immense: whole dwellings were hurled from their foundations, some of which were found at a considerable distance from the spot on which they stood, with the dead bodies of their unfortunate inhabitants within; others were broken into pieces on the spot; and some of them have been so totally destroyed, that not a fragment of them remains." Wooden barracks with many of their inmates were totally overwhelmed: an entire regiment of carbineers who had climbed up the roofs of one of them, all perished! Whole villages in the neighbourhood of the city had almost totally disappeared: of Emilianofka, not a trace remained! The imperial establishments at Cronstadt suffered greatly, and the fleet sustained irreparable damage: a ship of one hundred guns was left in the middle of one of the principal streets! In the imperial iron manufactory at Catherinoff, 200 workmen perished; and out of eighteen barracks, no less than fifteen were washed away. Such are a few, and but a few, of the results of this dreadful calamity. Alexander was a helpless spectator of the scene from his palace windows . what a lesson for human ambition!

rising out of its waters, present to the eye a variegated and splendid panorama, diversified by the prospect of islets which surround the city." Nothing can be conceived more magical than those villas which cover Krestoroski and Kameni Ostroff. Viewed as the caprices of man, ornamented with the most brilliant colours, constructed of deal, and light as the aërial palace of a fairy, they hardly seem to press upon the verdant turf on which they are erected. No uniform system of architecture was followed in their construction: Italy, France, England, Holland, and China, have furnished models; and this picturesque assemblage of styles seems to be an epitome of the whims of all nations upon earth.

The finest and most magnificent church in this city, and indeed in the whole empire, is that of St Isaac, begun by Catherine in 1766, but only finished in 1812. It is built of marble, and the expense of its erection and decorations is said to have amounted to 26,500,000 rubles. One church here is concatenated with another: Protestants, Catholics, Lutherans, Armenians, and Greeks, have their several churches beside and facing each other. The mansions of the nobles are vast piles of building, furnished with great cost, in the same elegant style as at Paris or London, and situated chiefly on the S. side of the Neva, either in the Admiralty Quarter, or in the suburbs of Livonia and Moscow, which are the finest parts of the city. The views upon the banks of the Neva exhibit the grandest and most lively scenes imaginable. That river is in many places as broad as the Thames at London; it is also deep, rapid, and as transparent as crystal; and its banks are lined on each side with a continued range of grand buildings. On the N. the fortress, the academy of sciences, and the academy of arts, are the most striking objects. On the opposite side are the imperial palace, the admiralty, the mansions of many Russian nobles, and the English line, so called because it is mostly occupied by English merchants. In the front of these buildings, on the S. side, is the quay, which extends three miles, except where it is interrupted by the admiralty; and the Neva throughout the whole of that space is embanked by a wall, parapet, and pavement of hewn granite. No monument in this city is more worthy of attention than that which Catherine II. erected to the memory of Peter I. in Peter Place. It is a large equestrian statue of that prince in the attitude of ascending a rock. The figure is said to have a noble appearance, and to be an exact likeness of that uncommon man.[39]

[39] "The statue, when I was at Petersburg, (says Coxe,) was not erected, but stood under a large wooden shade, near the Neva, within a few yards of its enormous pedestal. When Falconet had conceived the design of his statue, the base of which was to be formed of an huge rock, he carefully examined the environs of Petersburg, if, among the detached pieces of granite, which are scattered about these parts, one could be found of magnitude correspondent to the dimensions of the equestrian figure. After considerable research, he discovered a stupendous mass half buried in the midst of a morass. The expense and difficulty of transporting it were no obstacles to Catherine II. By her order, the morass was immediately drained, a road was cut through a forest, and carried over the marshy ground; and the stone, which, after it had been somewhat reduced, weighed at least 1,500 tons, was removed to Petersburg. This more than Roman work was, in less than six months from the time of its first discovery, accomplished by a windlass, and by means of large friction balls alternately placed and removed, in grooves fixed on each side of the road. In this manner it was drawn, with forty men seated on its top, about four miles to the banks of the Neva; there it was embarked on a vessel constructed on purpose to receive it, and thus conveyed about the same distance by water, to the spot where it now stands. When landed at Petersburg, it was 42 feet long at the base, 36 at the top, 21 thick, and 17 high; a bulk greatly surpassing in weight the most boasted monuments of Roman grandeur, which, according to the fond admirers of antiquity, would have baffled the skill of

The weather in Petersburg begins to be very variable about the end of September. During autumn the rains are so frequent, that we are assured, that of thirty days, twenty-four are rainy. The seasons that may with propriety be called spring and autumn, however, are extremely short; and winter and summer succeed each other with a rapidity unknown in more southern climates. Fires are necessary, except during two or three months in midsummer. During the middle of winter, particularly in the months of December and January, the weather is changeable: the most unexpected thaws succeeding the most intense frost, and again yielding to frost no less intense. During the whole season, however, the weather is always cold; and sometimes produces upon such as expose themselves to it the most melancholy effects. Nothing is more common, than to see persons whom the severity of the frost has deprived of several of their limbs. The only remedy is immediately to rub the part affected with snow or flannel. To approach the fire, or to dip the part in warm water, induces a mortification, and it soon falls off. Notwithstanding the severity of this climate—which to those who pass their lives in more southern regions may appear to be altogether intolerable—the peasants in Petersburg never desist from their ordinary occupations. Drivers may be seen in the streets with their sledges, passing along without concern, though both horse and man are literally cased in ice. They are, no doubt, dressed in such a way as to resist, in a great measure, the effects of the cold, their pelisse being generally made of a sheep's skin with the wool turned inwards; but, from many circumstances, we may conjecture that their bodies, by habit, are made to endure without inconvenience, a degree of cold from which their more southern neighbours would shrink with dread. Even the women are said to be frequently seen, during the most intense frost, washing their linens in the Neva, while they are obliged to have near them a hatchet to break open the ice which is formed round their hands. At this occupation, they are said often to continue no less than two hours, even when the thermometer is 60° below the freezing point. Habit, however, has not so reconciled the Russian to cold that it cannot hurt him. Servants, it has been asserted, are not unfrequently frozen to death while waiting for their masters.

Amusements.] No part of the city is, during winter, more crowded than the Neva. Carriages of all descriptions, and crowds of people, are continually passing between the different quarters of the city; while upon other parts of it, multitudes resort for the purpose of amusement. Enclosed places are allotted to the skaters. In one quarter may be seen all the exercises of horsemanship. In another the attention is attracted by a sledge-race. While in a third is exhibited an amusement in which a stranger would see more danger than diversion. This amusement consists in descending with a sledge upon an inclined plane incrusted with ice. Upon these inclined planes they descend with such rapidity, that the sledge proceeds, with amazing velocity, to a great distance, upon a kind of road formed on the ice for that purpose. So much are the Petersburgers accustomed to this exercise, that the younger of them

modern mechanics, and were alone sufficient to render conspicuous the reign of the most degenerate emperors. The pedestal, however, though still of prodigious magnitude, is far from retaining its original dimensions; as, in order to form a proper station for the statue, and to represent an ascent, the summit whereof the horse is endeavouring to attain, its bulk has been necessarily diminished."

generally descend from the plane upon their skates, resting only on one foot, as in that manner their balance is more easily preserved.

"As soon as the winter sets in," says M. Ancelot, "that is, as soon as the sea which is now agitated by the slightest wind becomes a solid mass, the road is marked out on the ice which leads from Petersburg to Cronstadt: this is done by a long line of large buoys. About every league are stationed sentry-boxes well warmed; and the sentinels, during foggy weather, keep up fires at certain distances, and by the tingling of bells, serve as a security and guide to the traveller. About half-way is established a restaurateur. The innumerable crowds of people, of all ages and both sexes, enveloped in their large pelisses, and gliding with indifference upon the fragile surface, which alone separates them from the abyss beneath, offer to the inhabitant of a southern country a strange sight, and impress him with a feeling of terror quite unknown to northern people. But it is when they begin to run the *bouers*, that the road of Cronstradt presents the most animated picture. These bouers are boats, fixed on two plates or blades of iron like skates, with a third which is adapted as a rudder. Seats are arranged round this bark, which has one, two, and sometimes three masts. Driven before a wind which always blows with violence during this season, and directed by an able pilot, these boats, distinguished by their variety of rigging and flags of different colours, skim along the surface with an inconceivable rapidity. A pale sun lends its rays to the scene, but imparts no heat; the sails are unfurled; the north wind whistles; the boat darts forward; and the sailors, by skilful manœuvres, endeavour to pass each other; and thus in less than an hour you glide through a space of ten leagues."

On the Neva too are held the great markets, at which the inhabitants of the metropolis purchase their winter provisions. This lively scene is thus described by Mr Coxe:—"At the conclusion of the long fast, which closes on the 14th of December (O.S.,) the Russians lay in their provisions for the remaining part of the winter. For this purpose, an annual market, which lasts three days, is held upon the river, near the fortress. A long street, above a mile in length, was lined on each side with an immense store of provisions, sufficient for the supply of this capital for the three following months. Many thousand raw carcases of oxen, sheep, hogs, pigs, together with geese, fowls, and every species of frozen food, were exposed to sale. The larger quadrupeds were grouped in various circles, upright, their hind legs fixed in the snow, with their heads and fore legs turned to each other: these towered above the rest, and occupied the hindermost row. Next to them succeeded a regular series of animals, descending gradually to the smallest, intermixed with poultry and game, hanging in festoons, and garnished with heaps of butter, fish, and eggs. I soon perceived, from the profusion of partridges, pheasants, moor-fowls, and cocks of the wood, that there were no laws in this country which prohibited the selling of game. I observed also the truth of what has been frequently asserted, that many of the birds, as well as several animals, in these northern regions, became white in winter, many hundred black cocks being changed to that colour; and some which had been taken before they had completed their metamorphosis, exhibited a mixture of black and white plumage. The most distant quarters contributed to supply this vast store of provisions; and the finest veal had been sent by land-carriage as far as from Archangel, which is situated at the distance of 830 miles from St Petersburg; yet, every species of food is surpri-

ingly cheap. In order to render this frozen food fit for dressing, it is first thawed in cold water. Frozen meat, however, certainly loses much of its flavour, and accordingly, the tables of persons of condition, and those of the English merchants, are supplied with fresh-killed meat."

Vapour-Baths.] In St Petersburg the bathing-houses are very numerous. The following account of their vapour-baths was communicated to Mr Coxe by an English gentleman at St Petersburg:—"The bathing-room was small and low, and contained a heap of large stones piled over a fire, and two broad benches, one near the ground and the other near the cieling. Small buckets of water being occasionally thrown upon the heated stones, filled the room with a hot and suffocating vapour, which, from its tendency to ascend, rendered the upper part much hotter than the lower. Having taken off my clothes, I laid myself down upon the highest bench, while the bathing woman was preparing tubs of hot and cold water, and continued to increase the vapour in the manner above mentioned. Having dipped a branch of twigs into the hot water, she repeatedly sprinkled, and then rubbed with it my whole body. In about half an hour, I removed to the lower bench, which I found much cooler, where the bathing woman lathered me from head to foot with soap, scrubbed me with flannel for the space of ten minutes; and throwing several buckets of warm water over me, till the soap was entirely washed off, she then dried me with napkins. As I put on my clothes in a room without a fire, I had an opportunity of remarking, that the cold air had little effect on my body, though in so heated a state; for, while I was dressing, I felt a glow of warmth, which continued during the whole night. This circumstance convinced me, that, when the natives rush from the vapour-baths into the river, or even roll in the snow, their sensations are in no respect disagreeable, nor the effects in any degree unwholesome."

Society.] M. Ancelot, who visited Petersburg in 1826, informs us that although both sexes assemble together in the drawing-room, they do not mix with each other. At an evening party, the married ladies form a group round a table at which the mistress of the house presides; the young ladies establish themselves in some corner of the room, and the gentlemen form themselves also into a separate party. The separation of the two sexes is not less rigorously observed at dinner than at evening parties; all the ladies place themselves on one side of the table, and the gentlemen on the other, so that during dinner time no communication is held between them, but by means of a solitary monosyllable or two thrown across the vases of flowers, which decorate the table. "Many travellers," says our author, "have proclaimed to Europe the ignorance of the Russian ladies. I am unable to say whether the judgment then pronounced was a fair one; but I cannot now concur in it. Availing myself of the privileges granted to a stranger, I have more than once passed this line of demarcation between the two sexes; I have conversed with those women who are accused of ignorance, but among the greater number, I have found diversified information joined to a refinement of mind, a knowledge often profound of European literature, and an elegant style of conversation, which might excite the envy of many of the French ladies. It is among young ladies that these qualifications are more particularly found, which would tend to prove that the education of women in Russia has, during the last century, taken a new direction, and what might have been true 30 years ago ceases to be so now. It is by no

means extraordinary to meet young ladies at Petersburg, who speak French, German, English, and Russian with equal fluency: I could even mention some who write these four languages in a style as remarkable for its extreme precision, as distinguished by its peculiar elegance. These extensive acquirements, and moral superiority may perhaps sufficiently account for the solitude in which the young men leave them, and the repugnance which the latter show to mixing with them." The English merchants in St Petersburg live in a splendid but social manner. In the metropolis of Russia enjoyment is the grand concern; and one peculiar advantage of the society here is, the mixture of persons of all ranks and countries, of all religious denominations, and of the most diversified manners. It is by no means unusual to see generals, officers, decorated personages, merchants, scholars, and artists, together in one company, or to meet around the same table with Russians, Germans, English, French, Spaniards, and Swedes. The result of this free and mixed intercourse is a general liberality of opinion, and affability of manners. Most young Russians of rank and education have made the grand tour; and many of them are as well acquainted with the customs and manners of Paris, Rome, and London, as with those of their own country.

Seminaries.] An institution for the education of the nobility in Petersburg, is known by the name of the *corps de cadets*. It was founded by the Empress Anne, but greatly augmented in its importance by Catherine II. It is endowed with an annual revenue of 135,000 rubles, or £30,000 sterling. It receives 540 sons of noble families; with 60 of inferior rank, who receive their education here in order afterwards to fill the place of tutors. They are all entered on the national service, and for the most part wear the national uniform. The age of admission is six; the term of remaining in the corps is fifteen years. The youth are divided into five classes, and are educated in different branches, according to the abilities and dispositions which they display. The principal subjects taught in this institution are French, English, German, and sometimes the Latin and Tartar languages, arithmetic, fortification, tactics, history, geography, dancing, the use of arms, riding, and, in some cases, drawing and music. They are divided into companies, in the form of a battalion, and are constantly exercised. In summer they are encamped for six weeks in the neighbourhood of Petersburg. The mode of education recommended by Rousseau, is, in a great measure adopted; and the young men are said to display an amazing agility in their exercises. They are made to forget that they are nobles; no fur clothing is allowed to them even in winter, and their apartments are very moderately warmed. Prizes are distributed to such as excel either in their studies or their exercises. Such as have gained six prizes, are sent to travel into foreign countries, with an annual allowance of 600 rubles.

While the education of the sons of noble families is thus provided for, that of the daughters is not neglected. Catherine II. converted a house erected for a convent into a female seminary. She endowed it with an annual revenue of 70,400 rubles, or £15,644 sterling; and in 1764, opened it for the reception of 200 young ladies belonging to noble families, and 240 daughters of commoners; 50 daughters of nobles were afterwards added, under the name of boarders. The ladies are admitted at the age of five or six, and leave the seminary at the age of eighteen. All are taught reading, writing, arithmetic, and the different branches of needle-work; but while the daughters of the nobles are receiving lessons

in history, geography, the grammar of the Russian language, in the French, German, Italian, and English languages, in music, drawing, and dancing,—the daughters of the commoners are instructed in the no less useful arts of cooking, washing, and such other occupations as are necessary in the management of a family.

Academy of Sciences.] The Imperial Academy of Sciences was founded by Peter I. in 1724. Catherine I. completed what Peter had begun, and appropriated a fund for the support of the institution. The most learned men, in different departments of science, were invited from foreign countries, and received, at Petersburg, that honour, and those emoluments, which their talents seemed to merit. Catherine II. dismissed such members as had been tempted to become so merely from the hopes of gain, and liberally recompensed such as by their labours and their ingenuity seemed to deserve it. According to her recommendation, the most intelligent members travelled into different parts of the empire to make such observations as should at the same time advance the interests of science and enable her to form a more just estimate of the state of her dominions. To defray the expenses of those expeditions, she, at different times, bestowed on the academy considerable sums. Several gentlemen were employed in these scientific travels; but the most famed were Gmelin and Pallas. The number of volumes in the library of the academy now exceeds 36,000. Among its curiosities are manuscripts of the lives of the saints, written in 1298 ; a very old copy of Nestor's chronicle ; with the acts and epistles of the Apostles, remarkable for being the first book printed in Russia. It is said to have been ten years under the press, and is dated at Moscow, 1564. This library also contains upwards of 3000 Chinese books, procured in the course of the Russian commerce with that nation.

Academy of Arts.] The Empress Elizabeth founded the Academy of Arts, and endowed it with a revenue of 18,000 rubles. The number of students admitted was forty. Catherine II. assigned it an annual allowance of 40,000 rubles ; and instead of forty students, fixed the number at three hundred. The age of admission to this academy is six, and the students continue in it twelve years. They are furnished with clothing, boarding, and lodging. Till the age of fourteen, they are instructed in reading, writing, arithmetic, and drawing, with the German and French languages ; after that age they are instructed in some of those arts taught in the academy. Annual prizes are distributed, and the most distinguished students are sent, at the expense of government, to improve themselves by travel in foreign lands.

In the circle of Schlüsselberg lies the important town and fortress of that name, at the issue of the Neva from the Ladoga. In this fortress state-prisoners are generally kept. The principal towns in the other circles of this government are of little importance, averaging 1500 inhabitants.

2d. Finland.] The government of Finland has probably received its name from its marshy surface. Besides the former Swedish province of the same name, it comprehends all the government of Viburg, or the ancient Russian Finland. It stretches to the highest north, and comprehends a territorial surface of 138,923 square miles, with a population of 1,350,000, which is rapidly increasing. It is hilly ; on the N. and W. some branches of the Scandinavian mountains enter this government ; on the E it is covered with sand-hills and rocks, intersected by marshes,

seas, lakes, and rivers, which diffuse cold and unwholesome mists. The most central lake in the country is the *Payana*, or 'the Peaceable;' it is about seventy-two miles in length, and thirteen in breadth. The lake of Saima on the east, which is crowded with islands, is still larger. It descends by six cataracts to the Tornea, which carries its waters into the Ladoga lake. The valleys between the hills are fertile, and vegetation decreases only towards the highest north. The coasts of the Bothnian and Finland Gulf are thickly strewn with granite and limestone rocks, and in some places present a labyrinthine archipelago of little islands. The climate varies from the rigorous polar climate to a more temperate one, which enjoys only one month of spring and two months of autumn, with a brief but frequently very hot summer; during which the night, usually serene and mild, extends to only four hours, and vegetation is extremely rapid. Agriculture, rearing of cattle, and fishing, are the principal occupations of the inhabitants. The harvest, consisting chiefly of barley and rye, sometimes yields an exportable surplus. In the interior of the country there is good timber for marine purposes. Granite is the principal mineral in this district. Iron was once worked in Finland Proper, but the Finlanders now import that metal from Sweden. A great quantity of nitre is made in this country. The country has good harbours; but they cannot be extensively used, as the long winter detains ships six months in harbour. In winter the transport by sledges affords an easy and rapid communication. The principal religion is the Lutheran. Mr James mentions a singular custom as existing at Abo. The prevalent religion here, as in Sweden, is the Lutheran. "The solemnization of marriages takes place only once a year, and that on a fixed day in the teeming autumn. Before this time arrives, the expectant lover is not permitted, by the custom of the land, to pay his addresses in person to the object of his wishes. His offer is made by sending a piece of money, that is accepted or not, as the fair one is inclined to approve or reject his suit; but both the conveyance of this token of love, and the whole of the after-ceremonials, are carried on through the intervention of some old woman of the village, whose occupation and calling may seem enviable to some bustling gentlewoman of other countries, being that of a regularly established match-maker." This government is divided into twelve circles, viz. the six ancient circles of Kexholm, Friedrichsham, Serdobol, Viburg, Vilmarstrand, and Neuschlot; and the seven yielded by Sweden, in 1809, viz. Kymmenegard, Tavastehuus, Abo, Kuopio, Vasa, and Uleäborg. The principal towns are Helsingfors and Abo. The latter town was recently almost totally consumed by fire, and the university established there has been removed to Helsingfors. The houses of the Finlanders are usually constructed of fir trees rudely squared by the axe, and laid, with a thin layer of moss between, upon each other; the ends, instead of being cut off, are generally left projecting beyond the sides of the building, and have a most savage and slovenly appearance. The roof is also of fir, sometimes stained red; the windows are frequently cut out with the axe after the sides of the house are raised. Sir John Carr remarks, that the summer burst upon him in this country with fiery fury on the 11th of July, with no earlier precursor than grass and green leaves. On a sudden, the flies, which experience a longer date of existence in the north than in the milder regions of Europe, awake from their torpor with the arrival of the hot weather, and annoy the traveller beyond imagination.

Lapmarks.] The districts called the Lapmarks belong to this province. They were fully ceded to Russia in the peace of Abo. The inhabitants are partly Lapponians and partly colonists. The Lapps are divided into herdsmen and fishermen. Tornea, the chief town of the Lapmarks, contains 660 inhabitants.

Aland Islands.] To this government likewise belongs the group of the Aland Islands. This group lies in the Bothnian Gulf, which they separate, and it might also be said, shut up from the Baltic. The principal island is about 40 miles long, and 30 broad. It contains several lakes, and is fertile in corn. The number of the inhabitants of the whole group is 13,340. There are eighty inhabited, and upwards of two hundred uninhabited. They export wood, coal, lime, butter, and cheese.

3d. Esthonia.] The government of Esthonia has its name from the aboriginal inhabitants, who give it the name of *Viroma*, or 'border-country.' It has a superficies of nearly 8,680 square miles, and a population of 396,032. Esthonia is in general a flat country, here and there broken by small eminences. The soil is meagre, and watered by no considerable river, excepting the Narva; and the only extensive lake is the Peipus. The climate is temperate, but foggy and unpleasant in summer. The principal occupation of the inhabitants is agriculture and fishing. They export corn, brandy, cattle, butter, tallow, skins, and salt fish. The inhabitants are Esthonians, Swedes, and Germans, chiefly professing the Lutheran religion. It is divided into four circles, viz. Reval, Hapsal, Vesenberg, and Veissenstein. The chief town is Reval, which lies in a small bay of the Finnish Gulf, and contains 15,000 inhabitants. The islands of Dagü, Vorms, and Nuckü, belong to this government. The former is about 40 miles long, and from 26 to 36 broad, and has a population of about 10,000.

4th. Livonia.] The government of Livonia has its name from its original inhabitants, now nearly extinct. It has a surface of 20,360 square miles, and a population of 737,734 persons, chiefly Lutherans. The country abounds in large woods, lakes, rivers, moors, and heaths; but it contains many fertile spots.[40] The Baltic here forms, between the island of Oesel and the continent, the large Gulf of Riga. On the N. E. is Lake Peipus. The principal river is the Düna. The inhabitants are industrious agriculturists. The winter is long and severe, but the climate healthy. The chief productions are corn, flax-seed, and timber. The servitude of the peasants was abolished in 1818. It is divided into five circles, viz. Riga, Venden, Dorpat, Pernau, and Arensburg, or the island of Oesel. The chief towns are Riga,[41]—whose commerce was established 650 years ago, by Bremen navigators—Pernau, and Dorpt.

Riga.] Riga is situated upon the Düna, six miles from its mouth, and is well-known as a place of commerce. It chiefly exports corn, hemp, flax, iron, timber, masts, leather, and tallow. Upon the Düna, at this place, is a floating bridge, of which the length is 2,600 feet, and the breadth 40 feet. It is removed during winter. The number of inhabitants is about 36,000: of these upwards of 9000 dwell within the

[40] Some idea may be formed of the ravages committed by wolves in Russia, from the following official account of their devastations in the government of Livonia only. In the year 1823, they devoured—horses, 1841; foals, 1243; horned cattle, 1807; calves, 733; sheep, 15,182; lambs, 726; goats, 2545; kids, 183; swine, 4190; sucking pigs, 312; dogs, 703; geese, 673.

[41] This name may be translated *Ridge*.

fortifications. The garrison generally consists of 1000 men. It has a library containing 12,000 volumes.

Dorpt.] Dorpt, 116 miles from Narva, suffered in a most dreadful manner during the wars between the Swedes and the Russians. This ancient town, which belonged, in the thirteenth century, to the Hanseatic League, is situated on the river Embach, being in the high road to the capital, and enjoys a considerable traffic. A university, with a large revenue, was established here in 1802; there are also a library of 30,000 volumes, museums of natural history and antiquities, and a botanic garden. In 1815 there were 37 professors and 310 students. A great annual fair is held here. The population is estimated at 6000. It stands in lat. 58° 22′ 45″ N., lon. 25° 28′ 9″ E. Round Dorpt the country is extremely fertile, so as to have been called the granary of the North. This fertile district stretches as far as Riga, which, however, is surrounded with deep barren sands.

Oesel.] The island of Oesel is 74 miles long, and in breadth 50; and with the islands of Moon and Runa, maintains a population of 34,256 inhabitants. With the exception of Zealand, this is the largest island in the Baltic. It possesses an undulated surface diversified with low hills, lakes, rivers, and woods. The climate is milder than on the adjacent continent. The lower classes are chiefly fishermen.

5th. Courland.] Courland was once a dutchy dependent on the crown of Poland, but was united to the Russian empire in 1795. It receives its name from its ancient inhabitants, the Kures. It has a superficial territory of 12,140 square miles, and a population of 569,000. This is a flat country, interspersed with sand hills, heaths, marshes, and fertile patches. The coasts consist partly of high downs, and are partly flat. The promontory which divides the Baltic from the Gulf of Riga, is the Domess Näss so much dreaded by navigators, before which an enormous sand-bank spreads. The Hüningsberg, an alluvial sand hill, rises here to the height of 700 feet. The principal river is the Düna; the largest lake that of Usmaiten. The soil is generally light and sandy, the climate rude and cold, but not variable, and considerably tempered by its proximity to the ocean. Agriculture and the rearing of cattle are the leading branches of industry. Courland is not divided, like the other governments, into circles, but bailliewicks. The principal towns are Mittau upon the Aa, with a population of 12,000 inhabitants, and Libau, a considerable commercial town at the mouth of the Libau.

CHAP. IX.—GREAT RUSSIA.

This is the genuine fatherland of the Russians, and constitutes, in fact, the most important and most consolidated portion of the Russian empire. It is divided into the governments of Moskva, Smolensk, Pskov, Novogorod, Olonez, Archangel, Vologda, Kostroma, Nishegorod, Vladimir, Tula, Kaluga, Twer, Jaroslav, Kursk, Orel, Riäsan, Tambof, and Voronesh.

1st. Moskva.] The government of Moskva has a superficial territory of 10,000 square miles, and a population of 1,289,823. This government presents an undulated surface, diversified only in a few points by small ridges or hills. The environs of the huge capital are considerably adorned

by art. The soil is for the most part clay and sand. Some districts of heath and marshes run through the country, the fertility of which is on the whole very indifferent. Every where, under the superior soil, there are beds of granite, of which many large blocks here appear, as in the north of Germany, scattered over the surface of the ground. The waters are numerous. Storch enumerates 2610 streams, and 109 lakes, none of which, however, are of any importance. The Volga, the Oka, and the Moskva—from which latter the government and capital take their name—are the only important rivers. The climate is temperate and healthy, and nowise distinguished from the other provinces of Russia, which lie within the temperate zone. The winter, including the broken days of spring and autumn, lasts about five months. Agriculture is the principal branch of industry; yet, as this province, though the best cultivated, is inferior in soil, and the capital consumes a vast quantity of provisions, the harvest is never sufficient for the bare consumption. Gardening is pretty successfully cultivated. Fruit is rare. Flax, hemp, and hops, are only cultivated for domestic consumption. There are various manufactures of cloth, silk, hats, cotton, linen, leather, copper, glass, china, and vitriol. Almost every family of peasants, in the circle of Moskva, conducts some branch of manufacture. On account of its natural situation, the province can only engage in land-commerce; but this is very considerable, Moscow being to the interior commerce, what Petersburg is to the exterior. The roads are excellent, and the Oka and Moskva offer important channels of communication. The great road from Moscow to Petersburg is continued, during a space of 500 miles, almost in a straight line, cut through a forest. This road is of an uniform breadth, and formed of trunks of trees, laid in rows parallel to each other, and bound down in the centre and at each end by long poles or beams fastened into the ground; these trunks are sometimes covered with boards, and sometimes with layers of boughs strewed over with sand or earth. Where the road is new it is remarkably good; but as the trunks decay, or sink below the level of the adjoining parts, it becomes very uncomfortable for travellers. The archbishop of this government is chief of the Russian Greek Church.

The City of Moscow.] Moscow,[42] though no longer the capital of the empire, is still the favourite residence of such of the nobles as choose to display the magnificence of eastern grandeur, at a distance from the restraints of court. It is 487 miles S. E. of Petersburg, in north latitude 55° 45′ 45″, and east longitude 37° 33′. "If," says Mr Coxe, who was there in 1784, "I was struck with the singularity of Smolensko, I was all astonishment at the immensity and variety of Moscow. A city so regular, so uncommon, so extraordinary, and so contrasted, had never before claimed my astonishment. The streets are, in general, exceedingly long and broad; and some of them are paved; others, particularly those in the suburbs, are formed with trunks of trees, or are boarded with planks like the floor of a room. Wretched hovels are blended with large palaces; cottages of one story stand next to the most superb and stately mansions; many brick structures are covered with wooden tops; some of the wooden houses are painted; others have iron doors and roofs. Numerous churches present themselves in every quarter, built in a peculiar style of architecture; some with domes of copper, others of tin, gilt or painted

[42] Written *Moskva*, and pronounced *Maskva* by the natives.

green, and many roofed with wood. In a word, some parts of this vast city have the appearance of a sequestered desert, other quarters that of a populous town; some of a contemptible village, others of a great capital. Moscow may be considered as a town built upon the Asiatic model, but gradually becoming more and more European; exhibiting, in its present state, a motley mixture of discordant architecture." The delightfulness of the country, now the site of Moscow and its environs, no doubt led to the foundation of a town in or near the present Kremle. The city is situated upon a number of gentle elevations, valleys, and plains; and in form resembles an irregular rhomboid. Its appearance is not less varied than the character of its inhabitants; and as the rivers flow between the chief elevations of the city, they give a beautiful relief to its extended range. Moscow, says Dr Lyall, is an ancient, Petersburg a modern city. The chief beauty of the latter consists in regularity,—the beauty of the former in irregularity. In Petersburg, the triumph of art over nature is every where visible; in Moscow these appear still engaged, as it were, in the attempt to excel each other, forming the finest combinations, or the greatest discordances. There are few straight streets in Moscow; but many of them are enormously wide. The *Plostchads*, or squares, places, and markets, are 25 in number. The *Krasnaya Plostchad*, or 'Beautiful square,' is not exceeded, if equalled in size, singularity, and grandeur, by any in Europe. The environs of Moscow are beautiful, but the soil is every where argillaceous, except on the sides of the Moskva; and hence, during summer and autumn, the city is often enveloped in clouds of dust. The Moskva flows in a winding channel; but, excepting in the spring, is only navigable for small rafts. It receives the Yausa in the Zemlianoigorod, and the Neglina at the western extremity of the Kremle; but the beds of both these rivulets are nearly dry in summer. Nearly one hundred bridges are thrown over these rivers. Previous to the invasion of the French, Moscow was the largest city in Europe; the circumference within the ramparts that enclosed the suburbs being twenty miles. It was also the most populous city in Russia; containing within the ramparts 312,000 souls. It still contains a population of above 200,000, and exhibits the same measure of meanness and magnificence, and the same motley grouping of population which it did in its better days. "In the Bazaar," says M. Ancelot, the traveller beholds "the turban of the Circassian by the side of the elegant hat fresh from the hands of the fashionable French shopkeeper; the close coat of the European by the long and flowing robes of Asia; the Muscovite bonnet, the rude frock, the boots or sandals of bark, mingled with splendid military uniforms and hats crowned with floating plumes. Around this great market-place are seen the carriage and four, the light drosky, and the primitive car which serves to bring to market the productions of the country. The eye is never tired of viewing these various scenes, with the diversities of costumes and physiognomy which enliven them, and make this city appear to belong to all mankind, uniting the extremes of civilization and barbarism."

The Kremle.] It is generally agreed, says Dr Lyall, that the Kremle received its denomination from the Tartars when they were in possession of Moscow, and that the term is derived from the Tartar word *Krim*, or *Krem*, which signifies a fortress. The Kremle has been called the fortress, the palace, the castle, the citadel, the holy citadel, &c. by different writers. It forms the centre of Moscow, and has a very elevated and commanding appearance. "Taken as a whole," says Dr Lyall,

"the Kremle is one of the most original, beautiful, and magnificent objects I have ever beheld. Its commanding situation on the banks of the Moskva river,—its high and venerable white walls, with numerous battlements, and variously coloured towers and steeples,—the number and the magnitude of some of its fine edifices, with their differently painted roofs,—the variety of its cathedrals, churches, monasteries, and belfries, with their almost innumerable domes, gilt, tin-plated, or green: indeed, the whole picture presents at the same time a varied unity, a consonance and incongruity of objects,—a contrast of ancient and modern works of art and taste,—a beauty, grandeur, and magnificence indescribable, and altogether unique." The walls of the Kremle are from 12 to 16 feet thick; externally their height varies at different places from 30 to 60 feet; they are furnished with battlements and embrasures, numerous towers and steeples, and a number of gates. There are no regular streets within the walls; all the edifices are built of stone, *i. e.* they have stone foundations, or foundations faced with white calcareous tufa, while the superstructures are formed of brick, stuccoed and painted white, orange, yellow, blue, green, &c. The interior of the Kremle presents a crowd of government-offices, churches, and monasteries. The jewel-chamber contains a number of gold and silver vases, goblets, and other vessels; and round the walls are ranged the thrones of different Tzars, and numerous crowns, including those of Kasan, Astrachan, Siberia, Georgia, and Poland, which bring to mind the gradual increase of this vast empire

The Exercise House.] The inconvenience, and sometimes impossibility of training and exercising troops out of doors during winter, in the rigorous climate of the north of the Russian empire, renders Exercise-houses absolutely necessary. Their utility is equally evident at times during summer, when they protect the soldier, and afford him a cool retreat during his manœuvres from the oppressive heat and an almost scorching sun. The government therefore has furnished both the capitals, as well as some of the chief towns in Russia, with these excellent edifices.

Adjoining to the Winter Palace at St Petersburg, there is a very handsome Exercise-house, which claims the stranger's attention, and was once unequalled in Russia. It is now, however, far surpassed in its size, its solidity, its architecture, and its elegance, by the new Exercise-house at Moscow, an enormous edifice, built in the year 1817.

	Sajins.	Feet.
The length of each front is	80	560
The breadth at each end	24	168
The height	6 or 6½	42 or 43½

In summer, the interior of the Exercise-house is cool and pleasant for the troops. In winter it is warmed by means of a number of stoves.[43]

Churches.] In the Cathedral of St Michael, the sovereigns of Russia were formerly interred: their bodies are deposited in raised sepulchres,

[43] "The dimensions of the Exercise-house, I believe," says Dr Lyall, from whom we have taken the above account. "are by far the greatest of any apartment in the world, whose roof is unsupported by columns. The number of troops that can be exercised in it, is two thousand infantry, or one thousand cavalry; but a battalion of the former, or a squadron of the latter, are all that are usually manœuvred at a time. In order that the reader may have a standard to assist him in forming an idea of its enormous magnitude, I shall here insert the dimensions of some celebrated edifices. The length of Westminster Hall is 275 feet, its breadth 74 feet, and its height 90 feet. The long room of the Custom-house of London, is 190 feet in length, by 66 feet wide, and 55 feet high. The great saloon of the Palazzo della Giustizia at Padua, is 300 feet long, 100 feet broad, and 100 feet high."

mostly of brick, in the shape of a coffin, above the pavement. Each tomb has, at its lower extremity, a small silver plate, upon which is engraved the name of the deceased prince, and the time of his death. Upon great festivals, all these sepulchres are covered with rich palls of gold or silver brocade, studded with pearls and jewels. The cathedral of the Assumption of the Virgin Mary has been long appropriated to the coronation of the Russian sovereigns. In the year 1819, Moscow contained six cathedrals, 21 monasteries, and 267 Greek churches. "Every monastery and church has its festival on the day of the saint to whom it is dedicated. These festivals are days of great rejoicing, mirth, and folly. In the country, the whole peasantry of the village where the festival is to be celebrated, as well as the peasantry in the neighbouring villages, assemble and attend the celebration of divine worship, during which, they pay particular devotion before the image of the saint to whom the church is dedicated. The same ceremony takes place at all the churches in town. But on the festivals of the cathedrals and monasteries, there is a holy procession from the cathedral of the Assumption, of a greater or smaller number of the clergy, according to the importance of the festival. They walk on foot, with uncovered heads, in regular order, accompanied by the holy banners, crosses, books, &c. and are protected from the crowd by the police and gens d'armes on horseback. The image of the saint to whom the church is dedicated, is peculiarly distinguished, and numerous burning candles are placed before it." [44]

Festival of the Resurrection.] Dr Clarke says, that the ceremony of the Resurrection at Moscow exceeds every thing of the kind at Rome, not even excepting the papal benediction during the holy week. He thus describes the extraordinary scene: "At midnight, the great bell of the cathedral tolled; its vibrations seemed to be the rolling of distant thunder; and they were instantly accompanied by the noise of all the bells of Moscow.

[44] "The churches," says Dr Lyall, "with few exceptions, are stuccoed and white-washed, or painted of a yellow, green, red, pink, blue, or some other colour: a few are painted in imitation of marble, and variegated like Turkish paper. The churches are generally built so as to stand east and west. But this is not always exactly observed; for if I be not deceived, I have remarked considerable variations from these points of the compass; and the church of St Nicholas, certainly stands north and south. The sanctuary, or altar, always occupies the east end, and the trapeza the west end of the church. The attendants, of course, worshipping before the *ikonostas* and royal doors, have their faces to the rising sun. Coxe says, 'Over the door of each church is the portrait of the saint to whom it is dedicated, to which the common people pay their homage as they pass, by taking off their hats, crossing themselves, and occasionally touching the ground with their heads; a ceremony which I often saw them repeat nine or ten times in succession.' This observation, though pretty correct, is too general. It would have been more accurate had he attributed the homage paid, generally speaking, to the temple of God, as being sacred; since many of the churches are not dedicated to saints, but to the events of our Saviour's life,—his nativity, his baptism, his entry into Jerusalem, transfiguration, crucifixion, resurrection, &c. Besides, the peasants also cross and bow themselves on passing a church on any side, and on a country road, when visible. Coxe's remarks, however, are often accurate. He might have included the nobility as well as the common people, the more religious of whom sometimes stop their carriages and alight opposite the most distinguished churches and cathedrals. The females cross themselves, and bow repeatedly; not only ten, but twenty, thirty, forty, fifty, or even a hundred times, and sometimes kneel on the ground. The males take off their hats, cross and bow themselves in the same manner, and sometimes also kneel. Even prostration is performed by the more enthusiastic. The paintings on the exterior of the Russian churches are generally executed on the walls; and though a few of them are tolerable, yet the generality are coarse daubings, in which high colouring, gigantic size, and gay decorations, make up for the higher efforts of art. They consist of representations of the Trinity; of God Almighty; the All-seeing eye; the transfiguration, ascension, and other great events of the life of our Saviour; of the prophets, apostles, and saints; of angels and archangels; the Virgin Mary and her child; the miracle-workers of Russia; the last judgment, &c.

Every inhabitant was stirring, and the rattling of carriages in the streets was greater than at noon-day. The whole city was in a blaze; lights were seen in all the windows, and innumerable torches in the streets. The tower of the cathedral was illuminated from its foundation to its cross. The same ceremony takes place in all the churches; and what is truly surprising, considering their number, they are all equally crowded. We hastened to the cathedral: it was filled with a prodigious assembly, consisting of all ranks of both sexes, bearing lighted wax tapers, to be afterwards heaped in rows upon the different shrines. The walls, the ceiling, and every part of the building, are covered with the pictures of saints and martyrs. At the moment of our arrival the doors were shut, and on the outside appeared Plato, the archbishop, preceded by banners and torches, and followed by all his train of priests, with crucifixes and censers, who were making, three times in procession, the tour of the cathedral, chanting with loud voices, and glittering in sumptuous vestments, bespangled with gold, silver, and precious stones. The snow had not melted so equally within the Kremlin as in the streets of the city; this magnificent procession was therefore constrained to move upon planks over the deep mud which surrounded the cathedral. After completing the third circuit, they all halted opposite the great doors, which were still closed; the archbishop with a censer then scattered incense against the doors and over the priests. Suddenly these doors were opened, and the effect was magnificent beyond description. The immense throng of spectators within, bearing innumerable tapers, formed two lines, through which the archbishop entered, advancing with his train, to a throne near the centre. The profusion of lights in all parts of the cathedral, and, among others, those of the numerous chandeliers in the centre, the richness of the dresses, and the vastness of the assembly, filled us with astonishment. Having joined the suite of the archbishop, we accompanied the procession, and passed even to the throne; here the police-officers permitted us to stand among the priests, near an embroidered stool of satin placed for the archbishop. The loud chorus which burst forth at the entrance to the church, continued as the procession moved towards the throne, and after the archbishop had taken his seat; when my attention was for a moment called off, by seeing one of the Russians earnestly crossing himself with his right hand, while his left was employed in picking my companion's pocket of his handkerchief. Soon after, the archbishop descended, and went all round the cathedral; first offering incense to the priests, and then to the people as he passed along. When he had returned to his seat, the priests, two by two, performed the same ceremony, beginning with the archbishop, who rose and made obeisance, with a lighted taper in his hand. From the moment the church doors were opened, the spectators had continued bowing their heads, and crossing themselves, insomuch that some of the people seemed really exhausted by the constant motion of the head and hands. We had no leisure to examine the dresses and figures of the priests, which were certainly the most striking we had ever seen. Their long, dark hair, without powder, fell down in ringlets, or straight and thick, far over their rich robes and shoulders; their dark, thick beards also entirely covered their breasts. Upon the heads of the archbishops and bishops were high caps, covered with gems, and adorned with miniature paintings, set in jewels, of the crucifixion, the virgin, and the saints. Their robes of various coloured satin, were of the most costly embroidery, and even upon these were miniature pictures set with precious

stones. Such, according to the consecrated record of ancient days, was the appearance of the high priests of old; holy men, standing by the tabernacle of the congregation, in fine raiment, the workmanship of 'Bezaleel, the son of Uri, the son of Hur, of the tribe of Judah.' It is said there is a convent in Moscow, where women are entirely employed in working dresses for the priests. After two hours had been spent in various ceremonies, the archbishop advanced, holding forth a cross, which all the people crowded to embrace, squeezing each other nearly to suffocation. As soon, however, as their eagerness had been somewhat satisfied, he returned to the sacristy, under a pretence of seeking for the body of Christ; where, putting on a plain purple robe, he again advanced, exclaiming three times in a very loud voice, 'CHRIST IS RISEN!' The most remarkable part of the ceremony now followed. The archbishop, descending into the body of the church, concluded the whole ceremony by crawling round the pavement on his hands and knees, kissing the consecrated pictures, whether on the pillars, the walls, the altars, or the tombs; the priests and all the people imitating his example. Sepulchres were opened, and the mummied bodies of incorruptible saints exhibited: all of these underwent the same general kissing."

Bells.] The superstitious idea attached to the ringing of bells has been already mentioned. The Russians conceive, that to give a bell to a church is an act still more religious than to ring it when given; and a very natural deduction from this is, that the sincerity of their religion is manifested in proportion to the size of the bell. Boris Godonof, who had ascended the throne by usurpation, and multiplied murders, could conceive no better way of atoning for his crimes, than by bestowing on a church in Moscow, a bell of unprecedented size. He accordingly gave to the cathedral one weighing 312,480 pounds; and 'died in peace.' The empress Anne recast this bell, and added to it 2000 poods of metal. The greatest part of the metal was Godonof's, but the bell, and consequently the religion, was now Anne's. It is the largest in the world, that of Pekin being lost in the comparison. Its circumference is 63 feet 11 inches, its height 19 feet; its greatest thickness, 23 inches; and its weight is 443,772 pounds. When the tower in which it hung was accidentally burnt, it fell, and a part of it was broken off; but none of the Russian sovereigns have been so pious as to recast it, and replace it in its tower. The piece which was broken out, has left a hole sufficient to admit two men without stooping.

Foundling Hospital.] No public institution in Moscow is more remarkable than the Foundling Hospital, which was erected by Catherine II. in 1764. It is amply supported by legacies and voluntary contributions, since the legislature allows many privileges to such as aid this charitable institution. The building is extensive, of a square form, and stands on the banks of the Moskwa, where it has the advantage of good air. It is fitted for the reception of 8000 children. Every attention is paid to the health of the children. The bed-rooms are well-aired. Each child has a separate bed. Their linen is changed thrice a-week, and their clothes once in eight days. The use of cradles is forbidden: and the clothes of the children are formed, and put on them, so as to leave them perfectly free in their motions. The children who have been received into this hospital, as they advance in years, are distributed into three classes. For the two first years they are under the care of the nurses. They are then admitted into the lowest or first class. The boys and girls are educated

indiscriminately, till they are seven years of age; and both sexes are taught not only reading, writing, and arithmetic, but the knitting of stockings, and the carding of flax, hemp, and wool. To these the girls add needle-work, spinning, cooking, baking, and such arts as are necessary to housewifery. Those who evince more than ordinary capacity, are instructed in the French and German languages; and some of the boys are taught music, dancing, drawing, and Latin. Fourteen is the age at which they are admitted into the last class. They have at this period the liberty of choosing the profession in which they are to be instructed. And for this purpose it is not necessary that they should quit the hospital, as several manufactures are established within it for the sole purpose of training the youth to particular professions. At the age of twenty they receive a sum of money, and are at liberty to settle in any part of the empire which they think proper.

Dwarfs.] Sir R. K. Porter gives a very lively and curious account of certain *freaks of nature*, which the nobles of Moscow exhibit in their houses,—These are dwarfs and fools. "They are here," says he, "the pages and the playthings of the great; and at almost all entertainments, stand for hours by their lord's chair, holding his snuff-box, or awaiting his commands. There is scarcely a nobleman in this country who is not possessed of one or more of these unfortunate creatures. The race of these little beings is very numerous in Russia. They are generally well shaped, and particularly graceful in their hands and feet; but their heads are commonly of a disproportionate size. In their features they possess a striking similarity to each other. Besides these Lilliputians, many of the nobility, with still greater barbarity of taste, keep a fool or two resembling the motleys of our ancestors in name alone, for their wit, if they ever had any, is swallowed up by their habitual indolence."

Wells of Mitistch.] Moscow is supplied with water from the far-famed wells of Mitistch, forty-two in number. Each is in form a small house, and the whole assemblage like a little village. The water is transparent, and of excellent quality; hence Catherine II. was induced to order it to be conveyed to Moscow by means of a canal, which cost 1,000,000 rubles.

Monastery of the Holy Trinity.] Forty-two miles N. by E. from Moscow is situated the celebrated monastery of the Holy Trinity. The proper name of this convent is Troitskaya Sergieva Lavia, or monastery of St Serge. This monastery has long enjoyed the special favour of the Russian Tzars; and by its enormous wealth and extensive jurisdiction, as well as the sieges it has sustained, has become highly distinguished in the annals of Russia. St Serge was born at Rostof, in the year 1315, and retiring from the world as a hermit while yet a young man, he soon obtained a wide reputation for sanctity, and was joined by other devotees, who formed a religious convent under his auspices. After the death of St Serge in 1393, the Tartars destroyed this monastery; but after the discovery of the saint's incorruptible relics in 1422, the fame of the place revived, and it so increased in power and wealth, that when its effects were attached to the crown by order of Catherine II. it had no less than 106,000 peasants on its property. It is built on the banks of a small stream called Kantchura; and resembles an ancient and strong fortress, being surrounded by high embattled walls and towers. The belfry is a fine piece of architecture, and contains one of those immense bells for which Russia is famous. In this convent, during the rebellion of the Strelitz, instigated by the

Tzarévna Sophia, the young Tzars John and Peter were secreted; and here also Peter the Great was concealed, and saved from destruction, by Scheglovitoi, commander of the Strelitz.

2d. Smolensk.] The government of Smolensk properly belongs to White Russia. It was acquired from Lithuania in 1654, and received its present name from the capital. It contains 24,000 square miles, and a population of 1,297,055. Its physical features resemble those of the preceding government; but the soil is superior. It is upon the whole an elevated tract of land, though not possessed of any lofty mountains. The principal river is the Dnieper. There are some lakes, and numerous marshes. The climate is colder than other provinces of Russia lying under the same latitude,—a quality to be attributed to its superior elevation. The principal occupation of the inhabitants is agriculture. Rye, barley, and oats are the chief corns. Hemp and flax are also cultivated in considerable quantity.

Town of Smolensk.] The town and fortress of Smolensk are situated upon the Dnieper. This fortress, which is considered as the key of Moscow, was stormed by the French in 1812. Its fortifications have been since repaired. Smolensk was thus described by Mr Coxe. "Though by no means the most magnificent, it is by far the most singular town I have ever seen. It is situated upon the river Dnieper, and occupies two hills and the valley which lies between them. It is surrounded by walls thirty feet high and fifteen feet thick, with the lower part of stone and the upper part of brick. These walls, which follow the shape of the hills, and enclose a circumference of seven versts (four miles and three quarters), have, at every angle, round or square towers of two or three stories, much broader at the top than at bottom, and covered with circular roofs of wood. The intervals are studded with smaller turrets. On the outside of the wall is a broad, deep ditch, regularly covered with traverses, glacis, &c. and where the ground is highest, there are redoubts of earth, according to the modern style of fortification. In the middle of the town is an eminence, upon which stands the cathedral, from whence I had a most picturesque view of the town, interspersed, within the circuit of the walls, with gardens, groves, copses, fields of pasture, and corn. The buildings are mostly wooden, of one story, (many of them no better than cottages,) excepting here and there a gentleman's house, which is called a palace, and several churches, constructed of brick and stuccoed. One long, broad street, which is paved, intersects the whole length of the town in a straight line: the other streets generally wind in circular directions, and are floored with planks. The walls, stretching over the uneven sides of the hills, till they reach the banks of the Dnieper; their ancient style of architecture; their grotesque towers; the spires of churches shooting above the trees, which are so numerous as almost to conceal the buildings from view; the appearance of meadows, and arable ground;—all these objects blended together, exhibit a scene of the most singular and contrasted kind. On the further side of the Dnieper are many straggling wooden houses, that form the suburbs, and are joined to the town by a wooden bridge. As far as I could collect from vague information, Smolensk contains 14,000 inhabitants: it has no manufactures, but carries on some commerce with the Ukraine, Dantzig, and Riga. The principal articles of its trade are flax, hemp, honey, wax, hides, hogs' bristles, masts, planks, and Siberian furs." Smolensk is 235 miles W. S. W. from Moscow.

3d. Pskov.] The government of Pskov is nearly equal in superficial extent to that of Smolensk; and its population is estimated at 784,000. The soil is clayey and sandy; a few hills and lakes diversify the surface. It has numerous streams navigable by *struses,* or small boats. Agriculture is here also the principal employment.

4th. Twer.] The government of Twer is estimated by Schubert at 24,630 square miles, and its population at 1,233,358. It is a highly elevated tract of land, from which a great many rivers, particularly the Volga, take their rise. There are 84 lakes, and 67 streams. The climate is changeable, but temperate and healthy. Twer, the capital of the government, has 20,000 inhabitants, and possesses a considerable commerce. At this city the navigation of the Volga may properly be said to commence. "The first circumstance," says Captain Cochrane, "which attracted my notice upon reaching Twer, was at the gate, where an impost of *three large stones* is levied upon every horse that passes, These are converted to the paving of the city; nor will the tax appear either slight or useless, in a country where stones are not very abundant."

5th. Novogorod.] Novogorod, once the seat of the most powerful Grand Dutchy of Russia, gives its name to the government, which contains about 56,000 square miles, with a population of 960,000 souls. This is an elevated piece of land, and includes the Waldai chain of floetz hills, about 100 miles in length. It possesses 42 rivers, and 48 lakes. Agriculture is the principal occupation of the inhabitants. Iron, lime, clay, slates, coals, and salt, are found here.

The Town of Novogorod.] Novogorod still contains about 1540 houses, and 10,000 inhabitants. In the days of its prosperity it is said to have covered an area of 63 versts in circumference, and to have contained at least 400,000 inhabitants. Chancellor, who passed through it in 1554, in his way to Moscow, thus describes it: "Next unto Moscow, the city of Novogorod is reputed the chiefest of Russia; for although it be in majestie inferior to it, yet, in greatnesse, it goeth beyond it. It is the chiefest and greatest mart town of all Muscovy; and albeit the emperor's seat is not there, but at Moscow, yet, the commodiousness of the river, falling into that gulf which is called *Sinus Finnicus,* whereby it is well frequented by merchants, makes it more famous than Moscow itself." The cathedral of St Sophia contains paintings of the remotest antiquity, and probably anterior to the revival of that art in Italy.

6th. Olonetz.] The government of Olonetz is estimated at 82,400 square miles, and may contain a population of 353,000. The Scandinavian hills run into this government, and surround its two large inland lakes, the Oneyga, and Ladoga. These heights are here a low chain of rocks rising only from fifty to seventy fathoms above the surface, yet are for the greater part of the year covered with snow. There are 1998 inland lakes in this province, and 858 streams; among which the Swir and the Olonka are the most important. The climate is severe but uniform. In winter a cold of 22 or even 30 degrees of Reaumur is not uncommon; yet in spite of this rigorous atmosphere, agriculture is followed in all the circles of the government, even between the 64th and 66th parallels. Fishing is also an important branch of industry. That of the Rapuschka or Muräne, (*Cyprinus Muraenula*) affords the principal source of nourishment to the inhabitants. The mineral treasures are granite, serpentine, porphyry, sandstone, quartz, lime, clay, amianthus,

slate, alabaster, talc, or Muscovy glass, marble in great quantities, and iron, which is little wrought.

7th. Archangel.] The government of Archangel, in ancient times a part of Biarmia, which Vassili Ivanovitch united in 1505 with the Russian empire, and to which, in 1784, the island of Nova Zembla, taken possession of in 1579, was added, takes its name from its capital. Nova Zembla should properly be included in the Asiatic territories, as the greater part of it stretches over Siberia. But as it extends into the European boundaries, and is included in the political division of Russia as European government, we shall retain it here. A few islands in the White Sea belong to this government; Nova Zembla itself lies in the Icy Sea. The whole superficial territory of this government, including the islands, is reckoned by Schubert at 352,082 square miles. Consequently it is the largest of all the European Russian governments, and is alone more than 40,000 square miles larger than the united States of Sweden and Norway; 80,000 square miles larger than the territories of the Austrian monarch; and 120,000 square miles larger than the superficial extent of France. The surface is a vast arctic plain, forming on the west the declivity of the Scandinavian Mountains, and sinking towards the middle. The soil is low and swampy; in winter stiffened by ice, and scarcely thawed by the heat of summer. The number of inhabitants is estimated at 163,000, of whom none are permanently located in the islands, which are only occasionally visited by Nomades. There are only seven towns in this enormous tract of country. Agriculture is hardly apparent here. Hunting and fishing are the principal employments of the inhabitants. A vast number of inland lakes intersect the country, whose principal rivers are the Dwina and Petschora. Several companies are established here for the hunting of fur animals, particularly sea animals, which are hunted in parties of ten or twelve huntsmen, who winter at Nova Zembla in huts. There are extensive forests in the southern parts of this government. A great quantity of linen is woven in the high north, which excels in quality all other Russian linen. The capital contains 8000 inhabitants. It has an extensive dock formed by the Dwina, but the harbour is accessible only from July to September.

Islands.] The island of Nova Zembla is the largest of all the known islands of the Polar Sea, containing a superficies of 90,000 square miles. The eastern coast is unnavigable on account of the huge icebergs; the western is flat, and thickly indented with bays and small embochures of rivers, which render it the usual abode of the huntsmen. The snow lies generally ten feet deep. There is little rain, but dew falls in considerable quantity on the stunted shrubs and lichens. The common animals are ice-bears, wolves, foxes, ermines, rein-deer, phocas, wild fowl, and whales. The mountains are said to contain silver, gold, and naphtha. It is said that silver mines were anciently wrought here. Vaigatz is an inhospitable, rocky island, valuable only as a hunting station, and inhabited only by a few families of Samoiedes. The Island of Kaljujef is wholly uninhabited.

8th. Vologda.] The government of Vologda contains 180,000 square miles, with a population of about 802,178. It consists of an enormous plain, bordering on the east upon the Ural, a branch of which intersects the N. E. It presents immense forests, large marshes, and numerous small lakes. The climate is colder than that of Petersburg,

though the latter is three-fourths of a degree farther north. The minerals are granite, quartz, feldspar, iron, and copper ore.

9*th. Yaroslav.*] Yaroslav is an elevated plain containing a superficial extent of 15,000 square miles, and a population of 1,022,991. The climate is severe, and the soil of indifferent fertility. A good deal of flax and wool is spun in this government.

10*th. Kostroma.*] The government of Kostroma contains a superficial territory of 40,000 square miles, with a population of 1,422,700. It is a large plain, diversified with one or two small hills, some lakes, and extensive forests.

11*th. Vladimir.*] The government of Vladimir is estimated at 20,000 square miles, with a population of 1,306,046. This is the central government of European Russia. Its principal river is the Oka. A few insignificant hills diversify its surface. The climate is temperate; but the winter is usually severe. In ancient times Vladimir formed one of the Grand Dutchies of the Russian empire. The town of Vladimir is one of the most ancient in Russia, and was the residence of the Grand Duke from 1157 to 1328, and the capital of Great Russia. It lies upon the Kliäsma, but retains little of its former magnificence. It has about 1500 inhabitants, and no fewer than 25 churches!

12*th. Nishegorod.*] The government of Nishegorod, or Nyshni Novogorod, has a superficial extent of 20,800 square miles, and a population of 1,219,508. The climate is temperate; and upon the whole, this province may be considered as one of the most fertile in the empire. Most of the villages are full of trades-people and small manufacturers. Nyshni Novogorod, the capital of this province, is one of the most important commercial towns in Russia. It has about 12,000 inhabitants.

13*th. Tambof.*] Tambof contains 24,000 square miles, with a population of 1,391,388. This is a uniform country. In the north there are some extensive woods. The mineral wells of Lipezk enjoy considerable reputation.

14*th. Riäsan.*] Riäsan, which takes its name from the ancient town of Riäsan, or Räsan, long since in ruins, has a superficial extent of 13,000 square miles, and a population of 1,270,300. Its climate is temperate, and soil fertile, especially in the south.

15*th. Tula.*] Tula has a superficial extent of 10,000 square miles, with a population estimated at 1,093,800. It is a uniform plain. The climate is temperate. Tula is one of the most important imperial manufactories of arms, furnishing annually arms for 15,000 men, besides other guns of great beauty, and very fine iron and steel ware.

16*th. Kaluga.*] The government of Kaluga has a superficial territory of 8,600 square miles, and a population of 1,159,600, being the most populous of all the Russian provinces in proportion to its extent. Agriculture is here extensively pursued, although the soil is only moderately fertile.

17*th. Orel.*] The government of Orel is estimated at 16,000 square miles, and its population at 1,270,100. It contains a few chains of limestone hills, and is one of the most fertile provinces of the monarchy.

18*th. Kursk.*] Kursk contains 15,000 square miles, with 1,611,200 inhabitants. This is also one of the fertile provinces of Russia. The climate is mild.

19*th. Voronesh.*] Voronesh has a superficial extent of 34,000 square miles, with a population of 1,436,400. The climate is temperate. The

principal river is the Don. A considerable quantity of grain is likewise reared in this province.

CHAP. X.—LITTLE RUSSIA.

THE country of the Malo Russians, or Little Russians, now sometimes denominated the country of the Cossacks, has been united to Russia only since the 17th century. Its four governments, viz. Kief, Tschernigof, Pultava, and Slobodsk-Ukraine, are the finest, the most populous, and perhaps the richest provinces of the empire.

1*st. Kief.*] Kief has an undulated surface of 17,000 square miles, with a population of 1,358,800. Its climate is very mild, and produces almost all the vegetables of temperate climates. The heat of summer is often so strong that the rivers are dried up. The town of Kief, upon the Dnieper, was in ancient times the residence of the Grand Dukes of Kief. Its population is about 40,000. Here is the most ancient classical academy of the Greek church, founded in 1588. The frozen wines of Kief are celebrated under the name of *rymorosky.* Mr James thus describes his visit to the famous catacombs of Kief: "We descended a long staircase *en ramp*, to the mouth of the sacred catacomb, being formed into a regular procession, and each bareheaded, carrying a lighted taper in his hand. It is a labyrinth, mined in the solid rock, consisting of walks, chambers, branches, &c., ascending and descending for the distance of several hundred yards; the passage about six feet wide, and coved at the top; its sides neatly plastered, and stained with a black wash; the flooring laid with iron plates about a foot square. The remains of seventy-three saints, or primitive Christians of Russia, the objects of veneration, are deposited in semicircular niches, that occur at intervals on the passage. The bodies are wrapped round and bandaged with swathings of silk, after the fashion of mummies, though no part, not even the face, is left visible. What was within, I know not; but they were scattered over with pieces of money, the offerings of devotees. ' The coffins, which are always left open, are of an oblong square figure, decreasing in breadth from the head downwards, adorned in the interior with flowers of gold painted on a red ground. These personages were the same who once found an asylum here, at a day when the unsettled nature of the times rendered them liable to perpetual persecutions abroad. On our return to the realms of day," continues Mr James, "we heard the chant of mass sounding from the church of the monastery, and thither we instantly repaired. The people whom we found assembled, completely filled every part of the area; it was a herd of pilgrims, habited in all the various costumes of the southern provinces of the empire, some of them being said to have made a journey on foot of 1,500 versts, in order to discharge their vows at Kief; and indeed, their lank, worn looks and tattered garments, seemed, in many instances, to bespeak the toilsomeness of their undertaking. While their devotions detain them here, they are for the most part obliged to lie out at night, being destitute of money to pay for lodging; and by day, only once, perhaps, receive refreshment, at the gratuitous repast which is provided, at the cost of the emperor, in the refectory of the monastery. But the enthusiasm, devotion, and superstition of a Russian, are easily able to surmount all these difficulties; and there is scarcely a person in the south, either of those who

have sins to expiate, or of those whose quiet and holy life requires some notable act to grace its monotonous career, but imposes on himself, at one time or other, the task of performing this burdensome act of over-zealous piety."

2d. *Tschernigov.*] The government of Tschernigov contains 20,000 square miles, and 1,278,500 inhabitants. The climate is mild, and soil fertile, but the country is occasionally devastated by locusts. Dr Lyall was here struck with the contrast between the Russians and the Malo-Russians. The houses, unlike those of Russia Proper—which present their gables,—front the road; and their exterior is white-washed. The interior is separated into kitchen, room, and bed-room, even in small houses.

3d. *Pultava.*] The government of Pultava has an extent of 17,000 square miles, and 1,933,000 inhabitants. It is one of the most fertile and highly cultivated plains of Russia. The capital Pultava, celebrated for the battle against the Swedes, contains about 10,000 inhabitants. The streets are spacious, and in the centre of the town is a good square, with a fine monument of granite, in honour of Charles's conqueror.

4th. *Slobodsk-Ukraine.*] The government of the Slobodsk-Ukraine has 20,000 square miles, with a population of 1,471,000. The climate is mild. Around the town of Iskum is grown a species of small grape which, when dried, furnishes an agreeable and slightly acidulous raisin.

CHAP. XI.—SOUTHERN RUSSIA.

In the course of the eighteenth, and the first ten years of the present century, Russia made many conquests upon its southern boundaries, all of which it incorporated with its vast empire, under the same political division of government as the rest of Russia. As these provinces constitute the southern frontier of European Russia, we class them, with the lands of the Cossacks of the Don, under the name of *Southern Russia,* which name seems to us more characteristic than that of *New Russia,* occasionally given to two of these southern provinces. The provinces belonging to Southern Russia are the governments of Ikaterinoslav, Cherson, Taurida, the territory of the Don Cossacks, and the province of Bessarabia.

1st. *Ikaterinoslav.*] The government of Ikaterinoslav according to the chart of Reymann, contains a superficial territory of 30,750 square miles, and, according to Wichmann—with whom Brömsen concurs—32,800 square miles. The population may be reckoned at 762,000. This government is an open steppe-land, destitute of wood, but considerably elevated. On the western side of the Dnieper extends a chain of hills; on the eastern side we find extensive meadows, and considerable patches of arable ground. The cultivated districts lie along the banks of the rivers which intersect this province; the interior parts are only traversed by the herdsmen and their cattle. The principal rivers are the Dnieper and the Don. The former of these rivers forms here those celebrated cataracts and whirlpools which are known under the name of *porogi.* They are thirteen in number. There are a considerable number of salt springs; but they cannot be made use of on account of the scarcity of fuel. The climate is equable and mild, and the winter is usually brief;

but the north wind is keenly felt, and whirlwinds frequently occur in the steppes. The spring is pleasant but transient, seldom exceeding one month in duration; it is followed by a hot dry summer, which is frequently sufficiently powerful to bring the plants of southern climates to maturity. Until the middle of the 18th century, this province was little more than a wide desert, occasionally traversed by the Cossacks and other wandering tribes. The cataracts of the Dnieper unfortunately impede water-carriage in this valuable province. Boats are usually unloaded at the cataracts, and their contents transported by land to Odessa and Cherson; though occasionally the goods are again put on board vessels beyond the cataracts. The original inhabitants of this province are the Cossacks of Zaporoga, a few remains of whom are yet found on both sides of the Dnieper.

Towns.] Among the principal towns are Ikaterinoslav, the seat of the provincial government, containing about 5000 inhabitants, and Bucharest on the eastern side of the Dnieper, remarkable as possessing the greatest horse-market in the whole empire. Nakhtschivan, a town on the Don, of 13,000 souls, is peopled by an Armenian colony. Its trade consists chiefly in silk and cotton; the silk-worm being extensively reared in this district. The towns near the mouths of the Don present the traveller with a novel and varied picture of society. He encounters half-a-dozen different nations and languages in the same number of minutes; and each nation in its peculiar dress. As we approached the Armenian settlement, says Dr Clarke, we beheld Tartars, Turks, Greeks, Cossacks, Russians, Italians, Calmucks, and Armenians; these, together with our English party, formed a representation of the costume of nine different nations within the compass of a quarter of an English mile.[45] Azof, once included among the cities of Asia, is now a wretched and insignificant village. Taganrok is built on a promontory commanding an extensive prospect of the Sea of Azof. It possesses a motley population of about 10,000 souls, and is memorable as being the place where the late emperor breathed his last on his journey through the provinces. This city formerly contained 70,000 inhabitants; but in terms of a capitulation made with the Turks, the original city was entirely rased. At present all the best houses are in the suburbs. There is not any situation in the south of Russia more favourable for commerce were it not for the want of water in summer, while in winter the sea is frozen, so that the sledges pass upon the ice to Azof. The Calmucks form large settlements in the steppes near Taganrok.

[45] "Nakhtshivan offers an example of that enterprising commercial spirit which is characteristic of Armenian merchants. They are not naturally a lively race of men. The Armenians are almost as grave as the Turks, and they have all the boorishness of Dutchmen; insomuch, that this is a common saying with European merchants in Constantinople; 'A sportive Armenian is as awkward as a dancing bear.' Yet, instigated by commercial speculations, these men traverse all countries, and overcome surprising obstacles; frequently making journeys to India, and to the most distant regions of the earth. Their commodities and their manufactures, as far as we were enabled to judge of them, appeared to be Turkish, and of a nature to find a ready sale in Axay and in Tcherkask. They supply all the fairs of the neighbouring provinces; and these fairs afford the most extraordinary sights in Europe, because they are attended by persons from almost every nation. There is scarcely a nation, civilized or barbarous, which has not its representative at the fairs which are held along the Sea of Azof, and upon the Don; but particularly at the great fair of Nakhtshivan. The Hamaxobii of Herodotus then make their appearance, as in the days of the historian; travelling in vehicles, the coverings of which are their tents by night, and tilts for their cars by day. Such moveable dwellings may be noticed in all the territories of the Tartars."—*Clarke*, vol. i. pp. 402—404.

Tumuli.] One peculiar feature in this country is the number of tumuli scattered over its surface, particularly on the eastern side of the Dnieper. Dr Clarke considers these tumuli are at least as early as the age of Alexander the Great, and perhaps much more ancient. Malte Brun observes, that some of them are not unlike the rude works of the early Hungarians, and these are formed of large and thin stones like the Scandinavian tombs. But in one which Dr Clark inspected, there was discovered an arched vault, shaped like an oven, constructed of very large square bricks, and paved, in a style of most exquisite wormanship, with the same materials.

2d. *Cherson.*] The territorial extent of the government of Cherson, has been variously estimated, from 20,000 to 26,000 square miles. Its population amounts to 523,600. It is an immense plain, intersected only by a branch of the mountains of the Dnieper, and a subsidiary chain of the Carpathian heights. The luxuriant herbage in the plains of this government chokes every other species of vegetation. From February to May the grass reaches to such a height, that the flocks disappear in it; but the heat of the summer dries up this rank luxuriance, and the rains of autumn are required for a second growth. Violent tempests occur here, and whirlwinds, which raise the dust in columns like those of the Arabian desert. The soil, though sufficiently adapted to the purposes of the agriculturist, is almost exclusively occupied as pasturage. A great proportion of the population reside in low huts made of reeds, or in very wretched cabins scarcely rising above the ground. The town of Cherson has a population of about 14,000 souls. This place once possessed a pretty important commerce, which has greatly declined since the building of Odessa. Two very different characters, Prince Potemkin and Howard the philanthropist, are buried in the vicinity of this town.[46] Nicolaoff, on the Bog, is a rising town, very advantageously situated, being without the bar of the Dnieper. It has deep, still water, and a healthy situation; and is the station for vessels when built. The admiral-in-chief of the Black Sea resides here. The public buildings are very stately; and the number of the public works, and the flourishing state of the population, place this town very high in the small catalogue of Russian towns of importance. The whole country between Nicolaoff and Odessa is a flat steppe, intersected by streams and inlets of sea-water.

Odessa.] Odessa, the emporium of the Russian commerce on the Black Sea, is situated between the mouths of the Dniester and Dnieper, at the south-west corner of the Bay of Adschai, in N. lat. 46° 29′ 30″, and east longitude 30° 45′ 22″. Its population consisting chiefly of Greeks and foreigners, amounts to about 35,000 souls. It is situate close to the coast, which is here very lofty, and much exposed to winds. The air is reckoned pure and remarkably wholesome. Corn is the principal article of exportation. The imports are dried and conserved fruits from Constantinople, Greek wines, tobacco, and other Turkish merchandise. The villages in the neighbourhood produce butter and cheese; these are rarities at table in the south of Russia. Potatoes, seldom seen in other

[46] "The tomb of Howard is in the desert, about a mile from the town; it was built by Admiral Mordvinof, and is a small brick pyramid, white-washed, but without any inscription. He himself fixed on the spot of his interment. He had built a small hut on this part of the steppe, where he passed much of his time, as the most healthy spot in the neighbourhood. Howard was spoken of with exceeding respect and affection, by all who remembered or knew him, and they were many."—*Heber's* MS. Journal, *apud Clarke.*

towns, are sold in the market, and they are even carried as presents to Constantinople. The melons of the neighbourhood are remarkably fine, and nearly equal to those found upon the coast of Syria. The whole country is destitute of wood; for fuel they burn weeds gathered in the steppes, as well as bundles of reeds and cow-dung: this last they collect, and stick upon the sides of their houses; a custom, observes Clarke, practised in the Isle of Portland, and throughout the whole county of Cornwall. The fortress of Odessa is small, but kept in good order.[47]

3d. Taurida.] The peninsula which forms the finest part of this province, had in ancient times the name of *Chersonesus Taurica*, and was afterwards called by its Tartarian inhabitants *Crimea*. When united to Russia, the ancient name was restored in the appellation *Taurida*. The superficial extent of this valuable province may be estimated at 40,000 square miles, and its population at nearly 450,000. This government has been divided by geographers into three principal districts, viz. The peninsula of Taurida; the Taurian continent, or Nogaian steppes; and the territory of Tchernomorski. The peninsula is of singular form. A range of floetz and limestone mountains runs along the southern coast, presenting an almost perpendicular barrier; towards the north they sink into the plains. The finest climate is found here, and the richest vegetation. "The ever-verdant laurel," says Pallas, "grows beside the olive, the pomegranate, the fig, or the date tree; high hills, masses of rock, streams and cataracts, verdant fields and woods, and the sea, that bounds the horizon, renders the landscape equal to any imagined or described by poets. The simple life of the good Tartars, their cottages cut in the solid rock, and concealed by the thick foliage of surrounding gardens, the flute of the shepherd, his flock scattered on solitary hills, remind the stranger of the golden age." Under the Greek, the Genoese, and the Tartarian domination, the peninsula continued in a flourishing state; but on its union to the Russian empire, upwards of two-thirds of the population forsook their ancient abodes. The principal town is Simferopol, with a motley population of 20,000. Caffa was once the most flourishing city in the peninsula. Under the Genoese it contained 41,000 houses: when visited by Dr Clarke, it did not contain above fifty families; but the population has been on the increase of late. The harbour is large, but not safe for wintering. Catherine, by ukase of 30th June, 1792, ceded upwards of 16,000 square miles of territory in this government to the Cossacks who had distinguished themselves in the war with Turkey; and from that time these people were called the *Tchernomorski*, or Cossacks of the Black Sea.

Cossacks of the Black Sea.] "The Tchernomorski," says Dr Clarke, "do not resemble the Cossacks of the Don, in habits, in disposition, or in any other characteristic. The Cossacks of the Don all wear the same uniform: those of the Black Sea wear any habit suiting their caprice.

[47] "Odessa will ever be a port of great importance to Russia, while she is prevented from laying her hands upon the Turkish empire; because, from its proximity to the Porte, a constant eye is kept upon the operations of the Turks. It has also the advantage of being so rarely obstructed by ice, that a vessel may generally escape; whereas, in other ports of the Black Sea, an enemy upon the ice may attack the ships as well as the works: this happened when the Russians took Oczakof. The extraordinary degrees of temperature in these latitudes are altogether unaccountable. Captain Bergamini informed us, that his ship was once detained five months in the mouth of the Danube, by the freezing of the sea. Ovid, during his residence near the same place, had witnessed a similar event." (Trist. Eleg. lib. iii. 10.)—*Clarke.*

The Don Cossack is mild, affable, and polite: the Black Sea Cossack is blunt, and even rude, from the boldness and martial hardihood of his manner. If poor, he appears clad like a primeval shepherd, or the wildest mountaineer; at the same time having his head bald, except one long braided lock from the crown: this is placed behind the right ear. If rich, he is very lavish in the costliness of his dress, which consists of embroidered velvet, and the richest silks and cloths of every variety of colour; wearing at the same time short cropped hair, giving to his head the appearance of the finest busts of the ancient Romans. The distinctive mark of a Black Sea Cossack, borne by the lowest order among them, of a braided lock from the crown of the head, passing behind the right ear, is retained even by the officers; but it is concealed by the younger part of them, with very artful foppery, among their dark hair. They seemed ashamed to have it noticed; although, like a relic on the breast of a Catholic, it is preserved even with religious veneration; and there was not one of them who would not sooner have parted with his life, than with this badge of the tribe to which he belonged. The custom is of Polish origin; but in this part of the world, it serves like a sign among free-masons; and it distinguishes the Tchernomorski Cossack from the Cossack of the Don, as well as from every other tribe of Cossacks in the Russian empire. The Tchernomorski are more cheerful and noisy than the Don Cossacks; turbulent in their mirth; vehement in conversation; somewhat querulous; and, if not engaged in dispute, are generally laughing or singing. The Cossacks of the Don hold this people in little estimation, considering them as an inferior band of plunderers when in actual service. But it may be said, the Tchernomorski entertain the same sentiments with regard to them; making remarks similar to those urged by the uneducated and lower class of Englishmen concerning foreigners; such as, 'that one Cossack of the Black Sea is a match for any three of his neighbours of the Don.' The Russian regards both with aversion, and affects to consider them as beneath his notice, and as unworthy of his society, for no other assignable reason than ignorance or envy. The Cossack is rich; the Russian is poor. The Cossack is high-minded; the Russian is abject. The Cossack is, for the most part, clean in his person, honourable, valiant, often well-informed, and possesses, with his loftiness of soul, a very noble stature: the Russian is generally filthy, unprincipled, dastardly, always ignorant, and is rarely dignified by any elevation of mind or body."[48]

4th. Don Cossacks.] The territory of the Don Cossacks extends to about 70,000 square miles, and has a population, variously estimated, from 230,000 to double that number. It is one vast continuous plain. The Cossacks and Calmucks possess large herds of cattle. A rich Cossack is sometimes known to possess from 500 to 1000 horses. The Cossacks speak Russ, and profess the Greek religion. They are governed by atamans, or chiefs, elected annually, and an ataman-general who is chosen by the emperor.[49] Dr Clarke thus describes the Don Cossack:

[48] "The Cossack horses are what would be called in England, good Galloways. Their masters vaunt very much their speed and hardiness. According to them, a moderately good horse will go sixty versts, or forty miles, at full speed, without stopping. They are seldom handsome."—*Heber's* MS. Journal.

[49] The reigns of government are entirely in the hands of the ataman and his officers, who wear the most theatrical and splendid habits known to any people in the world. Their breasts are covered with chains of gold and gold lace. Their sabre is Turkish; their boots, of red or yellow-coloured leather; their cap, of black velvet, ornamented

"His dignified and majestic look, his elevated brows and dark mustaches, his tall helmet of black wool, terminated by a crimson sack, with its plumes, laced festoon, and white cockade; his upright posture; the ease and elegance of his gait; give to the Don Cossack an air of great importance. There is no nation in the world more neat in regard to dress; and whether young or old, it appears to become them all. A quiet life seems quite unsuited to their disposition; they loiter about, having then no employment to interest them, and being devoted to war, seemed distressed by the indolence of peace."

5th. Bessarabia.] The government of Bessarabia, composed of the two provinces of Bessarabia and Eastern Moldavia, was only annexed to the Russian empire in 1812. Its extent has been estimated at 20,000 square miles; and its population, by Hassell, at 310,000. This province would admit of extensive cultivation; the climate is mild; the mountains are covered with fine wood; and the hills with vines. The Dniester is here a very rapid running river. Poppies are here extensively cultivated for the purpose of preparing an opiate with the seeds of the *chelidonium magnum*.

Ismael.] Ismael is a very strong fortress, built upon an arm of the Danube, about 33 miles from the Black Sea, and 268 N. of Constantinople. Previous to the storming of this place by Suvarof, the town contained almost 25,000 inhabitants; it now lies in ruins.

CHAP. XII.—WESTERN RUSSIA.

UNDER the name of Western Russia we include all the Polish and Lithuanian [50] provinces which have been united to the Russian empire, and incorporated with the constitution of that kingdom. It comprehends the governments of Wilna, Grodno, the province of Bialystock, the government of Vitebsk, Mohilev, Minsk, Volhynia, and Podolia.

1st. Wilna.] The government of Wilna consists of a highly elevated plain of about 24,000 square miles, with a population of about 1,400,000. The whole of this country appears to have been in very ancient times clothed with one vast continuous forest, parts of which yet remain wholly impenetrable to man. The soil, however, is generally fertile; and only in a few tracts do we find moors and heaths. The Niemen forms the boundary between this government and Poland on the S. W.; and the Beresina takes its rise here. The winter is brief, but very severe. Two or three days of a Lithuanian winter proved very fatal to the remains of the French army on their retreat from Russia. The summer is damp and

with lace and silver chains, or fine black Tartarian wool, taken from lambs in an embryo state. They bind their waist with silken sashes, sustaining pistols of the most costly workmanship. A small whip, with a short leathern thong, is attached to their little finger. The lower extremity of their lance is supported by the right foot; and from the powder-flask, pendent in front, are suspended silver coins and other trinkets.

[50] The Lithuanian provinces are Mohilev, Vitebsk, Minsk, Wilna, and Grodno. The Lithuanian and Russian traditions throw little light on the origin of the Lithuanians. They appear in the 11th century under the name of Lettes, as tributaries of the Russian king. After the death of Vladimir, they freed themselves from the Russian yoke, and rose to importance as an independent nation. In 1235, we find Ringold, king of Lithuania. Mazona, Polesia, Ezernigivia, Samogitia, and other Russian provinces; and under his son, Mendozo, and his successor, the whole of Lithuania was recovered from Great Russia. Gedem subdued Kief, and Vladislav Jagello—who was baptized in 1386—united, by his marriage with the Polish queen Hedwig, Lithuania, and the subjugated Russian provinces, with Poland.

foggy, but upon the whole favourable to vegetation. Agriculture is the principal occupation of the inhabitants. Hemp and flax are here grown to a considerable extent. The forests are filled with bears, wolves, wild boars, and beavers. The cattle are excellent, and the breed of horses in this province are very handsome, and highly esteemed for light cavalry. Honey is abundant; the natives make from it *lipetz*, or white hydromel, a spirituous liquor, and *malinek*, a species of mead mixed with raspberries. The original inhabitants of this country have sunk very low in civilization; its nobility is confined to the Poles, of whom the higher ranks live in princely magnificence. The innkeepers in this province are chiefly Jews, whose numbers are said to exceed 100,000 in this province.

Towns.] The capital of this government is Wilna, built on the confluence of the Wilna—which is here a navigable river—and the Wilienka. The population of this town exceeds 30,000 souls, of whom 5000 are Jews. This city forms the chief winter-residence of the nobility. It carries on an extensive commerce with Memel, Kœnigsberg, and other places. Kiernovo on the Wilna, was once the residence of the grand dukes of Lithuania, who also resided for some time at Troki. There is a magnificent convent of Kamadulenses at Friedensberg, inhabited by twenty-five hermits. This edifice was erected, in 1674, by Christopher Paz, chancellor of Lithuania, a descendant of the Florentine Pazzi,[51] who, having in vain contended against the powerful Medici, left Tuscany, and settled in Poland.

2d. Grodno.] The government of Grodno extends to about 12,000 square miles, with a population of 843,000. This country, though generally resembling the preceding government in physical features, is, upon the whole, better cultivated, and more populous; neither is the climate so damp as that of Wilna. The Bog separates this province on the south from Poland. The breed of sheep here is considered good. Grodno, the chief town, has about 5000 inhabitants.

3d. Bialystock.] The province of Bialystock extends to about 3,500 square miles, with a population of 220,000 inhabitants, of whom a ninth part are Jews. This province corresponds partly with the ancient Podlachia. The inferior nobility are so very poor that they occasionally enter into the service of the wealthier members of their class. The Bog, which is here navigable, places this province in communication with the Vistula, and consequently with Dantzig. The *plica Polonica* frequently occurs here. The principal town, of the same name with the province, contains about 6000 souls, and belongs to Count Potocky.

4th. Vitebsk.] The government of Vitebsk is estimated at 17,000 square miles, with a population of 915,000. It consists of an immense plain, diversified only by a few hills, and here and there a patch of wood. The Düna is navigable for light boats, and commerce is likewise facilitated here by the canal of Beresin, which unites the Dnieper with the Düna. The capital, of the same name with the province, is situated upon the Düna, and contains a population of about 15,000 souls, a large proportion of whom are Jews.

5th. Mohilev.] The government of Mohilev has a territorial extent of 19,000 square miles, with a population of 964,000. There are fewer

[51] This family, one of the richest in the Florentine State, became renowned in history by their conspiracy against the Medici in 1478. The failure of that celebrated attempt occasioned the extirpation of nearly the whole house of the Pazzi, with the exception of the Lorenzo branch, which found shelter in Poland.

lakes and marshes in this government than in that of Vitebsk. The capital Mohilev, is situated upon the Dnieper, and contains a population of 16,000 souls. Here the greater part of the nobility of White Russia reside during the winter. Its commerce is very considerable with Riga, Memel, Odessa, and other parts.

6th. Minsk.] The government of Minsk extends to 40,000 square miles, with a population of 140,000, being the least populous of any of the united Polish provinces. The country is an immense plain, thinly sprinkled with hills, but presenting extensive woods, and large marshes. This province, though possessing great agricultural capabilities, is one of the most neglected in the whole empire. Its capital, Minsk, contains a population of about 3000 souls.

7th. Volhynia.] Volhynia, an ancient Polish province, contains about 30,000 square miles, and 1,464,000 inhabitants. It consists of an elevated and fertile plain running along the declivity of the Carpathian Mountains. The climate is more mild and equable than that of any other province in the temperate districts of Russia, and may be compared to that of the south of Germany, only the winter is more severe. Agriculture is here in a very flourishing state, and the rearing of cattle is favoured by the extensive pasturages. The want of large rivers is unfavourable to commerce. Shitomir, the capital, contains a population of 5,500 inhabitants. It is situated upon the small, but rapid river Tetcrow, the rocky banks of which present many romantic situations. "Here," says Von Balzko, "I first noticed a particular way of building, which I afterwards frequently met with in many of the Russian towns, rendering them of immense extent, in proportion to their population. The great houses are not contiguous to the street; but there is a fence with a great gate, and behind that a large court-yard, on each side of which are small dwellings for the domestics, and the stables. In the back ground is situated the elegant mansion, and behind this there is generally a spacious garden. M. de Ligne, some years ago, described Moscow as looking exactly as if three or four hundred great old chateaus had come to live together, each bringing along with it its own little attendant village of thatched cottages."

8th. Podolia.] Podolia has a territorial extent of about 20,000 square miles, and 1,610,000 inhabitants. It extends along a declivity of the Carpathian chain, a low branch of which intersects this government. The Dniester forms the boundary between this province and Bessarabia. The climate is upon the whole mild, and the district proverbially fertile, notwithstanding the wretched manner in which it is cultivated. The Jews are here, as in almost all the other provinces of Western Russia, the principal merchants. Kamaniek, the principal town of this government, is situated at the confluence of the Smotrykza and the Dniester It is divided into two parts; one of them, the citadel, which is elevated upon a high craggy rock, is considered one of the strongest fortresses in Poland, and long withstood the arms of Russia in 1793.

Authorities.] The reader who wishes further information regarding the history, geography, &c. of Russia, may consult the following works:—Voyages and Travels of the Ambassadors in Muscovy, Tartary, &c., by Olearius, fol. 1662.—Lord Whitworth's Account of Russia in 1710, 8vo. 1758.—Perry's State of Russia under Peter the Great, 8vo

1716.—Hanway's Travels in Russia, 4to. 1753.—Baron Manstein's Memoirs of Russia from 1727—1744, 4to. 1763.—Coxe's Travels into Poland, Russia, &c., 2 vols. 4to. 1784.—Atlas general et elementaire de l'empire des toutes les Russies par Ancelin et le Grand, 46 feuill, 1796. —Castera's History of Catherine II. by Hunter, 8vo. 1800.—Atlas vom Russ. Reiche in 20 Bl. St Petersb. 1800.—Guthrie's Tour through the Crimea, 4to. 1802.—Pallas's Travels through the Southern Provinces of Russia, 2 vols. 4to. 1803.—H. Storch's histor. stat. Gemalde des Russ. Reichs. 8 vols. Leipsig, 1803.—C. G. A. Geisler, Voyage pittoresque dans quelques provinces de la Russie. fol. Lips. 1804.—J. Richter's Russ. Miscellen. 3 vols. Leipsig, 1805.—J. Bell's Travels in Russia and Asia, 8vo. 1806.—Travelling Sketches in Russia and Sweden, by R. K. Porter, 2 vols. 4to. 1809.—Sir Robert Wilson on the Russian army, 4to. 1810.—Clarke's Travels in Russia, Tartary, and Turkey, vol. 1st. 4to. 1813.—Dictionnaire Geogr. Hist. de l'empire de Russie. par N. S. Vsevoloisky, 2 vols. 8vo. Moskwa, 1813.—Anderson's History and Present state of the Russian empire, 8vo. 1815.—Cochrane's Narrative of a Pedestrian Journey through Russia, &c. 2 vols. 8vo. 1823.—Lyall's Character of the Russians, and History of Moscow, 4to. 1823.—Lyall's Account of the Military Colonies in Russia, 8vo. 1824.—Lyall's Travels in Russia, &c. 2 vols. 8vo. 1825.—Six Mois en Russie. Par M. Ancelot. 8vo. Paris, 1827.—Travels in Russia, &c. by W. R. Wilson, 2 vols. 8vo. 1828.—Die Russischen Staats Kalender.

CHAP. XIII.—KINGDOM OF POLAND.

POLAND, a word which signifies in the Slavonian language 'a flat land' or 'plain,' is a name very aptly given to the country between the Vistula and the Niemen, which, with the exception of the first declivities of the Carpathian range, hardly possesses a hill or mountain. This country, however, only received its present name in the 10th century, when the ancient appellation, *Sarmatia*, was beginning to vanish from history. The present kingdom of Poland, the melancholy remains of the empire of the once powerful Jagellones, has a superficial territory of nearly 48,000 square miles, with a population, ascertained by census in 1819, of 3,472,500. The following general observations are to be understood as applicable to Poland in all its extent.

Physical Features.] The face of this country is diversified with fruitful fields, steppes, heaths, impenetrable forests, marshes, and moors. "The traveller," says M. Burnett, "sometimes finds himself in an expanse of surface, almost without a house, a tree, or any single object large enough to attract his notice. Soon, however, are descried the skirts of some vast forest fringing the distant horizon; and on entering it we proceed for eight or ten miles winding with the road through lofty pines, precluded from the sight of all objects but trees and shrubs. Sometimes, in the midst of a forest, we meet with a small spot of ground, of ten or twenty acres, cleared and cultivated; its sides prettily fenced by the green surrounding woods. Sometimes a small lake is found thus situated, the borders ornamented in a similar manner; and these, generally speaking, are the prettiest scenes which Poland furnishes. The forests extend in some places fifteen and twenty miles in every direction; and

if we exclude morasses and the level pasture land, not more than one-half of this country is cleared of wood." The soil is in general thin and sandy, and of course easily ploughed. It is well-watered, every district possessing one or two considerable streams, which might easily be united in one great system of inland navigation. Many centuries ago, indeed, under the Jagellones, an extensive commerce was conducted upon the rivers of Poland; but the internal navigation of this country has almost disappeared, and even the Vistula itself falls into a sea no longer covered with Polish vessels. The principal rivers are the Vistula, the Varta, the Niemen, and the Bog. The climate is every where temperate, but, upon the whole, not so mild as in Germany under the same degree of latitude, which is owing probably to the country lying quite open to the north wind. The air is pure and healthy, and there are no endemic diseases known except the *plica Polonica.*

Productions.] The principal productions of Poland are corn, cattle, hemp, and flax. Poland might become the granary of Europe. Dantzig many centuries ago bore the proud name of *Europæ totius granarium et emporium.* But long ages of vassalage and political oppression have nearly annihilated the resources of this fine country. The cultivators of wheat in Poland are universally both owners and occupiers of the soil, their only tenants being their labourers or vassals, and the greater part of the produce being raised for exportation. The direct exporters or traders are the Jews, the only capitalists in the country. All the instruments of husbandry are wretched, and its operations ill-performed. The common course of cropping is the old system of a whole year's fallow, followed by winter corn, and that by summer corn, and then a fallow again. The winter crop in the northern part of Poland consists of wheat and rye; the proportion of the latter to the former being nearly as 9 to 1.—In the south the wheat amounts sometimes to a fifth, or even a fourth of the rye. The stock of cattle is much smaller even than in Prussia—being on an average about the eighth part of what is found on the same extent of land in England. The greater part of the country is extremely well adapted for the breeding of sheep; but as yet very little attention has been paid to that department of husbandry. The sheep that have been introduced are of an inferior breed. The cows too are of a smallish race, are kept in bad condition, and yield very little butter, and no tolerable cheese.

Peasantry.] The most numerous class of cultivators are peasants, who have a limited property in the lands which they occupy, under the condition of working a certain number of days in the week for their lord. In general, this peasantry, who are no longer *adstricti glebæ,* are involved in debt to their lord, and altogether in a condition of great distress. In consequence of their pecuniary embarrassments, their lately acquired freedom has, as yet, been hardly of any service to them. The want of a peasantry is a great subject of complaint among many proprietors. The people and their cattle live together in wooden huts, consisting of one room, with a stove, and covered with thatch or shingles. Their common food is cabbage, potatoes, sometimes pease, black bread, and gruel without butter or meat. Their chief drink is water or whisky, which is drunk, whenever they can obtain in, in enormous quantities. They are very fond of salt; have little or no furniture; and nothing but the most ragged and filthy clothing. They are ill educated, superstitious, and fanatical; observing about 20 holidays in the year, besides the Sundays, and passing

much of their time in pilgrimages, telling beads, and other such occupations.

Nobility.] The nobility in Poland are extremely numerous, amounting it is said to upwards of 60,000 families. But of these only a few hundred are powerful or wealthy; the remainder are poor and possessed of very little landed property, one village often containing upwards of fifty of these petty landlords. There is no political distinction, however, acknowledged among the nobility. The richest magnate and the poorest nobleman whose territories are perhaps limited to a single paternal acre enjoy the same privileges.[52]

Constitution.] In the constitution of the kingdom of Poland the legislative and executive powers are separated. The latter is in the hands of the emperor of Russia as king of Poland; the first he shares with the States assembled in diet. The Polish Diet consists of two chambers; the Senate, and the Chamber of Deputies. It assembles once every two years, at a period fixed by the emperor; and the sittings do not exceed a fortnight. At the diet the subjects of discussion are the taxes, laws, and mint. The Council of State sends the project of the laws to the Chamber of Deputies, and after having undergone discussion there, they are sent up to the Senate for its approval. The Senate can interpose its negative; but this is a mere shadow of liberty, as the emperor can at any period dissolve both chambers; and, in fact, can promulgate laws without the consent of either body. The Senate consists of thirty members, and the Chamber of Deputies of sixty.

Religion.] The Roman catholic religion possesses the particular protection of the law in Poland; but religious opinions ground no distinction in the enjoyment of social rights. All classes are protected by the old fundamental maxim of the Polish kingdom; *neminem captivabimus, nisi jure victum.*

Army.] The Polish army is fixed at 50,000 men, and every Pole, without distinction of birth or religion, must serve as a soldier from the age of twenty to thirty. But young men devoted to the liberal professions, the elder sons of families, and state-officers are specially exempted from military service; and any person is allowed to serve by substitute.

Money.] The lowest description of Polish money is the shelen, equal in value to about $\frac{7}{12}$ths of a penny British. This, however, is an imaginary coin. A grish, the lowest real coin, is equal to 3 shelens. The lowest silver coin is the tinse, equal to about 7*d.* British. The florin, or *zlotte*, is equal to 30 groshen, or 1*s.* Nine florins of Little Poland, and 18 of Great Poland, equal 1 ducat, a gold piece worth about 10*s.* 6*d.* of British money.

Literature.] Poland possesses a national literature which has had its own brilliant epochs. The rich, flexible, and melodious Polish language, a dialect of the Slavonian, was early cultivated, and its pastoral literature is yet highly distinguished. Among the national poets we may mention Johannes Kochanofski, Ignatius Krasicki, Francis Karpinski, and Ignatius Niemcevicz. The Poles have a national epic poem, more

[52] Of late the use of titles, which were wont to be permitted to all the sons and successors of every nobleman, has been considerably restricted; though not unreasonably so, certainly, since the whole reform consists in not allowing any one to assume that of baron, unless his clear income from his estates exceed £25; none that of count, whose rents are less than £75; and none that of prince, who has less than £125. All the lands are now alienable, and may be purchased by any body except Jews, who alone, however, have any capital to buy them with.

valuable perhaps for the sentiment it contains than for any other merit. It is entitled the 'Jagelloniad,' and celebrates that era in the national history in which Lithuania and Poland were united. The author's name is Boncza Tomaszefshi. The history of their native country has been written by various Polish authors with spirit and taste. The early progress of the Polish language was considerably checked by the Latin language remaining longer than in any other state the polite language of the country. For a long while education was in this country the exclusive birthright of the nobility; since 1815, however, it has made considerable progress, and the inferior classes of citizens are now treading fast on the heels of the nobility, who for so many ages seemed the monopolists of education, as well as of wealth. Newspapers and periodical publications, though often paralyzed by a despotic censorship, are contributing their aid to diffuse information among all ranks. Cracovia, Lemberg, Posen, Warsaw, and Wilna, are the head-posts of Polish literature. Shakespeare's plays are an object of study in Poland; and the principal ones are very often performed upon the stage at Warsaw, Wilna, Cracow, and Leopol. The Poles having cultivated for a considerable while, and with an exclusive taste, the French literature, appear at present to direct their attention to that of the English. The birth-place of the Polish language is said to be Przemysl in Galicia. Several very good grammars of the language have been written within the last twenty years. Wilna is particularly distinguished in the cultivation of the national literature. The ordinary schools in the Polish towns are in a very poor state, and the villages do not yet possess any seminaries of instruction.

Political Divisions.] Russian Poland is divided into waivodships, viz.; Cracovia, Sandomir, Kalisch, Lublin, Plock, Masovia, Podlachia, and Augustov. And these again are divided into districts.

1*st. Masovia.*] The waivodship of Masovia contains 7000 square miles, and 481,000 inhabitants. This province lies on both sides of the Vistula; it is fertile and well-cultivated, especially in the neighbourhood of the capital, where the plains, which are annually overflowed by the Vistula, afford the richest pasturage perhaps in Europe.

Warsaw.] In this waivodship lies Warsaw, the capital of the kingdom, the seat of the government, and of the archbishop of Warsaw, who assumes the name of primate of Poland. This city is situated upon a rising ground on the left branch of the Vistula, and is connected with the suburb of Praga by a pontoon bridge of 1578 feet in length, which it is in contemplation to supply with a cast iron one. There are several other suburbs, which form by far the finest part of the town, the streets themselves being very irregular and confined. The place of Sigismund, so called from a colossal bronze statue of the third emperor of that name which stands here, is very spacious. Another elegant, and we believe a public monument to prince Poniatofski who fell in the battle of Leipsic, has been, or is about to be erected in Warsaw, from a design by Thorwaldson. The Zameck, or royal castle in which the sittings of the Diet are held, was built on an eminence near the town, by Sigismund III. The number of houses is about 4000, of which above one-fourth are thatched with straw. The population may be estimated at 100,000 souls, of whom 20,000 are Jews, exclusive of the garrison which amounts to 20,000. The Marieville is a large building constructed on the plan of the palais royal of Paris, and contains the exchange and upwards of 300 booths for the display of wares. Warsaw presents as heterogeneous an appear-

ance as any other city in the north. We here find 115 very splendid palaces set down in the middle of a mass of the most miserable *dwareks* or huts. Streets of stately breadth, formed of palaces in the finest Italian style, and wooden huts which threaten every moment to rush down over the heads of their inmates; in these edifices, Asiatic pomp combined in strange union with Greenland squalor. An ever-moving population forming the sharpest contrasts, as in a perpetual masquerade; long-bearded Jews; monks in the garb of every order; here veiled and deeply shrouded nuns of strictest discipline, walking self-secluded and apart; then flights of young Polesses, in silk mantles of the brightest colours, talking and promenading over broad squares. The venerable ancient Polish noble, with moustaches, caftan, girdle, sabre, and red or yellow boots; the new generation equipt to the utmost pitch as Parisian *Incroyables;* with Turks, Greeks, Russians, Italians, Frenchmen, in ever-changing throng. The Lutheran church is the finest ecclesiastical edifice in Warsaw. There are likewise several convents, and hospitals, two mad houses, and a university, founded in 1816. Among the schools are several on the Lancasterian principle. Warsaw early rose into commercial importance through its vicinity to the Vistula; it still retains somewhat of its ancient distinction in this respect. Its commerce consists chiefly in the produce of the country. The manufactures are cloth, linen, carpets, stockings, carriages, and harness.

2d. Kalisch.] The waivodship of Kalisch contains about 7000 square miles, with a population of 512,000. Its capital, of the same name, contains 7,500 souls, and is distinguished by its cloth and linen manufactures. The houses of this city are massively built, and the streets uniform and elegant.

3d. Cracovia.] The waivodship of Cracovia takes its name from the ancient town of Cracow, which, however, does not politically belong to this waivodship, as it now constitutes an independent republic. The territorial surface of Cracovia may be estimated at 5,500 square miles, and its population at 445,000. The principal town is Kielca, which is very well built, and contains about 5000 inhabitants. This is the most fertile part of Poland. There is in it, however, the same suffering as elsewhere, from the low prices of produce, and a disposition to invest any capital that can be found in mining rather than in cultivating the soil. In Poland few of the lands are rented, except those which belong to the Crown, and which comprehend one-third of the whole surface of the kingdom, or about ten millions of acres, two millions of which are woodland. The tenants of the Crown are exempted from certain taxes, and have peculiar advantages for maintaining a numerous peasantry; but the rent of the land is nevertheless extremely low, averaging from 8*d*. to 14*d*. per English acre, and even at that rate exceeding what the land can afford.

Method of transporting corn upon the Vistula.] "There are two modes," says Mr Jacob, "of conveying wheat to Dantzic by the Vistula. That which grows near the lower parts of the river, which is generally of an inferior quality, is conveyed in covered boats, with shifting boards that protect the cargo from the rain, but not from pilfering. These vessels are long, draw about 15 inches water, and bring about 150 quarters of wheat. They are not, however, so well calculated for the upper parts of the river. From Cracow, where the Vistula first becomes navigable, to below the junction of the Bug with that stream, the wheat is mostly

conveyed to Dantzic in open flats. These are constructed on the banks in seasons of leisure, on spots far from the ordinary reach of the water, but which, when the rains of autumn, or the melted snow of the Carpathian Mountains in the spring, fill and overflow the river, are easily floated. Barges of this description are about 75 feet long, and 20 broad, with a depth of 2½ feet. They are made of fir, rudely put together, fastened with wooden treenails, the corners dovetailed and secured with slight iron clamps, the only iron employed in the construction. A large tree, the length of the vessel, runs along the bottom, to which the timbers are secured This roughly cut keelson runs 9 or 10 inches from the floor, and hurdles are laid on it which extend to the sides. They are covered with mats made of rye-straw, and serve the purpose of dunnage; leaving below a space in which the water that leaks through the sides and bottom is received. Vessels of this description draw from 10 to 12 inches of water, and yet they frequently get aground in descending the river. The cargoes usually consist of from 180 to 200 quarters of wheat. The wheat is thrown on the mats, piled as high as the gunwale, and left uncovered, exposed to all the inclemencies of the weather, and to the pilfering of the crew. During the passage the barge is carried along by the force of the stream, oars being merely used at the head and stern, to steer clear of the sandbanks, which are numerous and shifting; and to direct the vessel in passing under the several bridges. These vessels are conducted by six or seven men. A small boat precedes with a man in it, who is employed in sounding. This mode of navigating is necessarily very slow; and during the progress of it, which lasts several weeks, and even months, the rain, if any falls, soon causes the wheat to grow, and the vessel assumes the appearance of a floating meadow. The shooting of the fibres soon forms a thick mat, and prevents the rain from penetrating more than an inch or two. The main bulk is protected by this kind of covering, and when that is thrown aside, is found in a tolerable condition. The vessels are broken up at Dantzic, and usually sell for about two-thirds of their original cost. The men who conduct them return on foot. When the cargo arrives at Dantzic or Elbing, all but the grown surface is thrown on the land, spread abroad, exposed to the sun and air, and frequently turned over till any slight moisture it may have imbibed is dried. If a shower of rain falls, as well as during the night, the heaps of wheat on the shore are thrown together, in the form of the steep roof of a house, that the rain may run off, and are covered with a linen cloth. It is thus frequently a long time after the wheat has reached Dantzic before it is fit to be placed in the warehouses."

4*th. Sandomir.*] The territorial extent of the waivodship of Sandomir measures about 5,700 square miles, with a population of 432,000. Here the most extensive iron furnaces in Poland are wrought. There are also some copper mines. The principal town is Radim, containing about 1500 inhabitants.

5*th. Lublin.*] The waivodship of Lublin contains 6,900 square miles, with a population of 490,000. Its capital, of the same name, contains 10,400 inhabitants. Agriculture is here well-conducted. M. Chaltkofski supposes that the secale of Lublin changes in time into wheat; it contains a great quantity of flour, and is remarkable for its thin pellicle. The fairs of Lublin are frequented by German, Russian, American, Greek, and Turkish merchants.

6*th. Podlachia.*] The waivodship of Podlachia is estimated at 5600

square miles, and the population 286,000. This is a fertile country, but in many places very wild and picturesque. Siedlec, the chief town, contains 2200 inhabitants. The bread which is made here is in high repute throughout the whole country, and likewise an ardent spirit which is manufactured here.

7th. Plock.] The waivodship of Plock contains 7,800 square miles. Its population is estimated at 364,000. The town of Plock has a population of 6000 souls, and conducts a considerable commerce by the Vistula. Pultaska, famous in history as marking the site of two great battles, contains about 2,200 inhabitants. The extent of land in cultivation in this waivodship is equal to 127,984 *hufens;* a Polish hufen or hide, being nearly equal to thirty acres. The forests, heaths, marshes and lakes, extend to 102,386 hufens.

8th. Augustov.] The waivodship of Augustov contains 1600 square miles, and 335,000 inhabitants. The largest inland lakes of Poland are situated here. The town of Suvalki contains 3000 inhabitants. The town of Augustov has nearly 2000 inhabitants, and carries on a considerable trade in cattle. The colossal Kamadulensian convent of Wigry is built upon an island in a lake of the same name in this waivodship; and upwards of ten thousand pilgrims annually resort to the Dominican monastery of Segny.

Authorities.] The following works may be consulted on the geography and history of Poland, viz. Tableau de la Pologne, ancienne et moderne, par Malte Brun, 8vo. Paris, 1807.—Die Polnischen Geographen.—Voyage en Allemagne et en Pologne, etc. par Gley, Paris, 1816, 2 vols. 8vo.—Rulhiere's Histoire de l'Anarchie de Pologne et du Dememberment de cette Republique. Paris, 1807, 4 vols.—An excellent Atlas of Poland, in 58 sections, was published at Weimar in 1820.

THE REPUBLIC OF CRACOW.

THIS little republic, whose territorial extent does not exceed 500 square miles, with a population of 100,000 souls, 30,000 of whom reside in the capital, owes its anomalous existence to the disputes of three despotic monarchs! In 1815, when the final fate of Poland was decided at the congress of Vienna, the Austrian and Russian monarchs respectively laid claim to the little town and territory of Cracow, situated at the very point where the newly acquired territories of these two powers and those of Prussia join together. To this lucky position Cracow owes its exemption from the fate of Poland. The holy allies, unable to determine which of their number had the best right to this little territory, magnanimously resolved that none of their number should possess it; and finally declared Cracow a republic under the protection of the three surrounding powers! A small district of very fertile land, running about twenty miles along the left banks of the Vistula, was on this occasion added to the territories of the republic.

Physical Features and Products.] Cracow, or Krakaw, consists of a plain running along the banks of the Vistula, which becomes navigable immediately under the walls of the capital. The climate is temperate, rather cold than warm, but, upon the whole, milder than the rest of Poland. The principal production is grain. A considerable quantity of cattle are likewise reared here. The agriculture of this district, though very slovenly in the eyes of a British farmer, is conducted in a superior manner to the rest of Poland; yet in bad years the district does not grow a sufficient quantity of grain for its own consumption. Apples, plums, cherries, chesnuts, almonds, and peaches, are reared in the neighbourhood of the capital. The vegetables of this district are in high repute throughout Poland. There are no manufactories with the exception of the iron-works of Krzessovice. The peasants manufacture their own cloth and linen; and a few weavers supply the capital, in which the whole commerce is concentrated.

Inhabitants.] The bulk of the inhabitants are Poles, and the Polish language is every where dominant. The religion is that of the Roman catholic church, the bishop of Cracow being primate; but all sects are freely tolerated. There is no political distinction among the inhabitants, if we except the members of the chapter of the cathedral and of the university, who possess a few unimportant privileges.

Constitution.] The constitution is called democratic. But notwithstanding the nominal independence of this republic, its makers have been pleased to declare that no criminal belonging to their States shall be protected within its neutral limits. The legislative power is in the hands of a popular representative assembly, which meets towards the close of each year, the sittings never exceeding four weeks. On these occasions laws are discussed, the administration reviewed, and the budget drawn up. This assembly likewise elects the senators and magistrates, who are

responsible to it. Each community, or parish, sends a deputy to the assembly, which likewise contains three members from the senate, three prelates from the chapter, three doctors from the faculties of the university, and six judges of equity. The president is chosen from the three members sent by the senate. No change of any existing laws can be proposed in this assembly which have not previously received the sanction of the senate. The executive power is vested in the senate, which consists of a president and twelve members, who must be thirty-five years of age, and contribute at least 150 Polish florins to the public revenue. The president, and eight senators, are elected by the popular representatives, the university elects two, and the chapter the other two. Six of the former class of senators and one of each of the latter retain their office for life; the others are changed annually. The president is elected every three years, but may be re-elected. The senate exercises the patronage of the republic. The political divisions of Cracow are into town and country-communities; the former containing at least 2000, and the latter 2500 inhabitants. Every community is governed by a *starost*, or mayor, and in every district of 6000 inhabitants is a judge of equity, a kind of justice of peace. The electors include all who pay 50 florins to the public service, or belong to a liberal profession. The military force consists of a town militia, and a body of gens d'arms for the preservation of public order. In 1817, the revenue amounted to 301,072 florins, and the expenditure to 286,440.

Cracow.] Cracow, the ancient capital of Poland, and once the place of coronation of her kings, possesses a large but dilapidated castle, and a cathedral remarkable on account of its altars and twenty chapels, and is the burial-place of several kings of Poland. There are 70 other churches and chapels in this city, and several magnificent convents. The streets are irregularly built. There is a large square, which is however disfigured by the miserable booths by which it is surrounded. The university, once called the *schola regni*, and the most ancient, and formerly the only establishment of the kind in Poland, is a fine building. In 1817, the number of students was only 131, although all Poles are allowed to receive their education here.

The country is divided into ten districts, containing one town, two boroughs, and seventy-seven villages and hamlets. The town of Chrzanav, is situated upon the Cholka, and contains about 1,300 inhabitants. The burgh of Krzessovice contains 3000 inhabitants, and is a fashionable place of resort. The aujacent country is remarkable for its rich and picturesque scenery.

DENMARK.

DENMARK, 'the *mark* or country of the Danes,'—a people whose name first appears in history about that period when the universal monarchy of Rome began to decline—consists, according to the ancient Danish divisions, of the Danish Islands, and the peninsula of Jutland. Since the dissolution of the German empire, the three Duchies of Sleswick, Holstein, and Lauenburg, have been added to this country. Iceland and the Feroe Islands have for many ages been considered as Danish settlements. Besides these European possessions, the Danish Crown has several foreign appendages which we may here enumerate; viz. Tranquebar on the coast of Coromandel, and the factories of Portonovo, Friedrichsnager, Bassora, and Serampore, the seat of the Baptist missionaries, in Asia; the forts of Christiansburg, Friedensburg, Königstein, and Prinzenstein, with the two factories of Afflahue and Little Poppo, all situated upon the Guinea coast, in Africa; the settlement of Greenland in North America; and the Islands of St Thomas, St Croix, and St John, in the West Indies.

Boundaries.] The kingdom of Denmark—comprehending under this name the Danish Islands, the peninsula of Jutland, and the three Duchies—lies on the northern edge of the temperate zone, between 8° and 12° 30′ eastern longitude, and 55° 21′ 5″, and 57° 42′ 24″ northern latitude. The islands are situated at the extremity of the Baltic, having the Cattegat on the north. The Sound divides Zealand from Schonen; the Great Belt, Funen from Zealand; the Small Belt, Funen from Sleswick. Laaland, Falster, Langeland, and Moen, are situated in the Baltic; and Samsöa in the Cattegat. The continent of Denmark forms a long projecting peninsula, washed on the N. and W. by the waters of the German Ocean; on the N. E. by the Cattegat; and on the S. E. by the Baltic. On the S. the Elbe forms the boundary; but the territory of Hamburg lies on the Danish side of that river; on the S. E. Denmark borders upon Mecklenburg and Lubec. In the Baltic are the islands of Femern, Arroe, and Alsen; in the German Ocean, Amröm, Nordstrand, Fuer, Sylt, Romoe, and several others; and in the Cattegat, Anholt, and Lessua.

Extent and Population.] The surface of the peninsula of Jutland and the islands, according to the most recent calculations, extends to 14,821, and that of the three Duchies to 7,551 square miles. The whole kingdom of Denmark may therefore be estimated at about 22,300 square miles. The Feroe Islands are said to have a superficial extent of 500 square miles; and Iceland, according to Eggar, contains 30,500 square miles. The population of the Danish dominions has not been officially returned since 1811, but at present approximates to 2,000,000; viz. Jutland, 400,000; Zealand (including Copenhagen,) Funen, and other islands,

550,000; Sleswick, 316,000; Holstein, 350,000; Lauenburg, 35,000; Iceland, 50,000; Feroe Islands, 5,300; settlements on the coast of West Greenland, 5,840; in the East and West Indies, Africa, &c. 100,000.

CHAP. I.—HISTORY.

Early History.] THE three northern kingdoms of Denmark, Sweden, and Norway, were anciently known by the common appellation of *Scandinavia*. The inhabitants of these regions were known only by obscure report to the historians of Rome. Tacitus mentions the Suiones, or Swedes, as a seafaring people. Pliny speaks of the peninsula of Nerigon or Norway, Swedish Norrige, and Danish Trorge. Thule—so often mentioned by the ancients—is conjectured to have been Iceland. The name *Danus* first occurs in the writings of Gregory of Tours, who flourished during the sixth century. Sweden, Norway, Denmark, and Jutland, were inhabited in the earliest times by a German tribe, which received frequent accessions from tribes of Finnic origin. About one hundred years before the Christian era, the inhabitants of Jutland—the *Chersonesus Cimbrica* of the Romans—and Sleswick, appear under the name of Cimbri. This people first became formidable to the Romans by the irruption which they made, in concert with the Teutones, into the beautiful province of Gallia. The Goths, under the conduct of the mysterious Odin,[1] subsequently invaded the Scandinavian countries, and gave to Denmark, as well as Norway and Sweden, a new dynasty of rulers. Skiold, the son of Odin, is said to have been the first king of Denmark. However, his history, and that of his descendants, is so much blended with the marvellous, that this epoch is justly called the fabulous in Danish history. All that is really known of this period is, that Denmark was early divided into a number of Petty States, composed of wild and adventurous warriors, whose principal occupation was that of piracy, and whose names carried terror through all the maritime districts of the North. When the power of the Romans began to decline, the names of the

[1] This celebrated personage holds the same rank in the northern mythology as Zeus or Jupiter in the Grecian. There are however two Odins, an older and a younger one. The first was the symbol and divinity of the sun, and there are many beautiful fictions in the mythology of the North respecting him. Such are those of his marriage with the earth,—his plunging into the ocean every evening,—and many others equally poetical. All these characteristics came at last to be transferred to the younger Odin, the chief of the Asæ, (Asiatics). In the Icelandic chronicles we find that Sigga, the chief of the Asæ, one of the rude nations between the Caspian and the Euxine Seas, retired before the victorious arms of Rome, in the time of Pompey, into the N. W. of Europe. It seems probable, however, that the emigration of Odin must have taken place at a period long anterior to the time of Pompey. His march went through Russia, where, according to tradition, he established one of his sons as chief of the country, and having done the same in Saxony and Franconia, he penetrated through Cimbria and Franconia into Denmark, where he caused his fifth son Skiold to be acknowledged sovereign. From hence he proceeded to Sweden, where Gylf at that time reigned, who received the marvellous stranger and embraced his religious doctrines. In Sweden, Sigga soon reached supreme power, and having built Sigtuna as the capital of his great empire, promulgated new laws, and founded a new religion. He assumed the name of Odin, and as inventor of the Runes, made himself dreaded as a mighty magician. Finally, he became honoured as a deity, and received the name, as he had performed the actions of the god of war. He bore 12 names in the old Asgard, and 114 other titles. Ihre supposes the name Odin, or Woden, to be derived from *vedan*, i. e. *insanire*, or the Gothic *vods*, i. e. *dæmoniacus*. Keysler informs us that Odin was called *waltader*, 'the father of slaughter;' *walloctur*, 'the father of arms;' and *sigmundurs*, 'the giver of victory.'

Danes and Normans became known in the south of Europe, whither these wild seafarers now forced their way, carrying devastation into those countries which had till then been protected by Roman arms.

Under the general name of *Normans* were comprehended, in the earliest periods of modern European history, the Danes, Swedes, and Norwegians, who founded in England two kingdoms,—established themselves under Rollo on the coast of Normandy,—peopled the Feroe Islands, the Orkneys, Shetlands, Iceland, and a part of Ireland,—and finally reached Spain, Italy, and Sicily. Wherever these intrepid warriors penetrated they spread the glory of their name, but tarnished it by the fierceness of their manner and piracies.[2] These expeditions, however, operated little change on the national constitution of the Normans which remained a federative system, on the plan of the German confederation, consisting of several clans or tribes, each possessing its own chief, but all paying allegiance to one king. It was not until the German kings of the Carlovingian stem began to interfere with the policy of the Normans that these tribes united more closely; but at the same time, the Norwegians and Danes separated into two distinct groups of States. Gorm subjugated Jutland in 863, and in 920 united all the small Danish States under his sceptre.

With the introduction of the Christian religion by a German missionary, Ansgar from Corvey, greater order and union were established in the northern States; but the worship of Odin long struggled to maintain its place against the progress of the new religion. Sven, the grandson of Gorm, in the year 1000, conquered a part of Norway, and made an inroad into England. Canute, his more illustrious son, not only accomplished in 1016 the conquest of England, but also subdued a part of Scotland, and in 1030 conquered the whole of Norway. Under this chief the power of Denmark reached its highest pitch. This prince, though great in war, neglected not the arts of peace, choosing rather to govern his subjects by the influence of equitable laws, than by the force of arms. Under him the Christian religion began to gain the ascendency over the horrid superstition so long prevalent in the North, and to impart to individual and social life the blessings with which it is so abundantly fraught. Canute died in 1036 leaving to his successors a mighty empire, to the government of which their energies soon appeared inadequate. In 1042 England shook off its allegiance; and in a few years afterwards the example was followed by Norway.

Sven Magnus Estritson established a new dynasty on the Danish throne in 1047, and revived the drooping spirits of the Danes. The wars maintained by Sven and Canute had founded the feudal system in this country, which, under the new dynasty, deprived the government of all power, and not only made the rulers dependent on the voices of the bishops and nobility, but also drained the resources of the country, reduced the peasants to a state of bondage, ruined agriculture, and threw the national commerce entirely into the hands of the German Hanseatic towns. Under this system the kings of Denmark were obliged to acknowledge the right of election in the States, and their power was restricted by a senate. Valdemar the Great was the only vigorous ruler

[2] These people received various appellations in the countries which they visited. By the western historians they were called *Danes* and *Normans*; in the English annals oftentimes *Esterlings*; in Russia they received the appellation of *Waruger* or *Varjager*; and in the Spano-Arabic, *Mantshu*.

of this dynasty; but succeeding conquerors, Canute VI. and Valdemar II. (1157 to 1223) while they spread their power upon the coasts of the Baltic, did not in the least advance the civilization of their own kingdom. Valdemar was made prisoner by the count Henry of Schwerin, and all the Danish conquests in Prussia and Courland were lost. When, in 1241, this prince divided his weakened kingdom amongst his sons, new internal divisions arose, while disputes with the powerful Hanseatic towns greatly weakened the power of the State. Upon the death of Valdemar III. and that of his grandson Olav IV., Margaret, Valdemar's daughter, assumed the reins of government in 1387. This princess, whose name is deservedly celebrated in the histories of the North, partly by marriage, and partly by conquest, united the crowns of Denmark, Norway, and Sweden, in 1388; an act which was solemnly ratified on the 12th July, 1397, by the union of Calmar, the articles of which declared that the three States should remain for ever indissolubly united, but should each retain their own laws and privileges. This union, however, was unfortunate in its issue, and under Erick of Pomerania, the grandson of Margaret's sister, who reigned from 1412 to 1439, new troubles broke out in Sweden and the German provinces, which were not appeased by his abdication, nor under his successor Christopher III. of Bavaria, who reigned from 1439 to 1448.

Middle History.] Christopher having died without an heir, Christian I., count of Oldenburg, the founder of the present royal family of Denmark, was elected by the Danes, and reigned from 1448 to 1481. This prince was obliged to conclude a treaty with the States, in which he acknowledged Denmark an elective kingdom. He united Norway, Sleswick, and Holstein, with the crown of Denmark. His son John, who reigned from 1481 to 1513, ratified a constitution which still more fettered the royal prerogatives than that acceded to by his father, and in Norway also his powers were considerably limited. He divided Holstein and Sleswick with his brother Frederic. Christian II., the son of John, an ambitious and cruel prince, yet not without talent, sought to deprive the nobles of their privileges and independence; but the attempt deprived him of Sweden, which dissolved the union of Calmar in 1523, and soon afterwards his two other crowns were wrested from him by the Danish and Norwegian nobility, who placed upon the throne his father's brother, Frederic I., duke of Sleswick and Holstein. This prince, who reigned till 1533, entered into alliance with Gustavus Vasa, king of Sweden, and with the town of Lubec. In the meantime, Christian, who had sought refuge in the Netherlands, having ventured to make a descent upon the Norwegian coast, was taken prisoner, and remained in captivity till the period of his death, in 1549. Frederic, however, was obliged to make many concessions to the powerful aristocracy who had elevated him to the throne, while the peasantry, oppressed and reduced almost to a state of bondage under the increasing preponderance of the nobility, broke out into frequent rebellions.

Christian III.] After Frederic's death the throne remained vacant for a whole year, till the intrepid spirit shown by the citizens of Lubec, in prohibiting the navigation of the Sound to the Netherland merchants, compelled the Danish aristocracy to accelerate the settlement of the government, and Christian III., in 1534 mounted the throne. This prince divided Sleswick and Holstein with his brothers John and Adolph,

the latter of whom became the founder of the house of Holstein-Gottorp. But this partition proved a fertile source of family disputes.

Frederic II.] In 1559 Frederic II. ascended the throne. This prince was involved in a war with Sweden on account of Livonia, which was put an end to by the peace of Stettin in 1570.

Christian IV.] Christian IV. on mounting the throne in 1588, renewed the war with Sweden, besides taking a very unfortunate part in the Thirty years' war. Under this prince, Denmark lost in the peace of Brumsabroo, in 1645, the territories of Jempteland and Herjedelen, and the two islands of Gotsland and Oesel; and Halland was likewise pledged for thirty years to Sweden. By the peace of Lubec, in 1629, Denmark withdrew from the Thirty years' war after having been worsted by Tilly.

Frederic III.] Christian was succeeded by his son Frederic III. in 1648, who having been induced by the Dutch to declare war against Charles Gustavus, in 1657, soon found that monarch a formidable enemy. Charles took Friedericstadt by assault, and, having led his army across the sea during winter, attacked the Danes in those islands which constituted the most valuable part of their territories. Frederic defended himself with much bravery, but might have found himself obliged to yield to the Swedes, had not Cromwell, the English protector, interposed in his favour. To purchase peace, however, Frederic was obliged to cede by the treaty of Roskild, the provinces of Halland, Blekingen, and Schonen; Bahus and Drontheim in Norway; and the island of Bornholm, to the Swedes. Frederic had, at first, consented to these terms, but he afterwards manifested a disposition to retract from them; whereupon Charles laid siege to the Danish capital. Frederic, whose courage and abilities seem to have been considerable, defended himself with intrepidity, till a Dutch fleet arriving in the Baltic, and discomfiting the fleet of the Swedes, compelled Charles to raise the siege of Copenhagen. The Danish king was now preparing to act the part of an aggressor, when the English, willing to enforce the performance of a treaty which had been formed by their mediation, appeared with a fleet on the side of Charles, and enabled him once more to lay siege to Copenhagen. More anxious, however, to reconcile the contending parties, than to protract hostilities, the English, in conjunction with the French, again offered their mediation for the re-establishment of peace, and after some negotiation, a new treaty was concluded, by which Bahus, Blekingen, Halland, and Schonen, were ceded to the Swedes.

Revolution.] Frederic, by the intrepidity of his character, had greatly endeared himself to the common people, and had confirmed their affection by granting them several privileges which had formerly been denied to the lower orders. Till 1660, the government of Denmark had been vested in the king, with the three estates of the kingdom,—the nobles, the clergy, and the commons. It would appear that the peasants, at least of the royal demesnes, had till the reign of Valdemar II. formed a fourth estate, as in Sweden and in the Tyrol. The power of the king was extremely limited; he was only the president of the privy council, a body composed of the great officers of state, and the commander-in-chief of the forces. The monarchy was, by the constitution, elective; but the choice was confined to the reigning family, and generally fell on the elder son, or on the nearest male. The power of the nobles in Denmark seems at this time, to have been exorbitant, and, in the usual spirit of men vested with undue power,

they wished still farther to extend their authority. When the treaty above mentioned was concluded, an assembly of the States was summoned for the purpose of considering the condition of the kingdom, exhausted by the war which had been just terminated. This assembly accordingly met at Copenhagen in the autumn of 1660, for the first time since 1536. The commons had formerly been obliged to sustain the whole burden of the government, but they now foresaw that the burden would be by far too heavy. The nobles were, perhaps, convinced, that reason required the richest members of the State to contribute to its aid at such an emergency; and offered to contribute to the relief of the State, but insisted that this concession should not be considered as a precedent, or subject them to future taxes. To reject the offer of the nobles was not difficult, but still it was necessary to provide for the exigences of the State. To make this provision in an adequate manner, was scarcely possible for the commons. It was necessary that the nobles should contribute their share, a measure to which they would by no means consent, without the augmentation of their privileges, and this augmentation seemed to the two plebeian orders to endanger their remaining liberty. In such a situation, a desperate effort became necessary: and, accordingly, to remedy one evil they incurred another · to deprive the nobles of their power, the clergy and the commons declared the crown hereditary. The nobles rejected the bill; but these two orders laid their decree before the king, and being supported by the soldiery, the third order yielded to the power which it could not resist. On the 15th January, 1661, each of the three orders separately presented to the king a decree rendering the crown hereditary in the female as well as male line, and vesting him with the power of distributing all political authority in the State; and in 1665, the king by virtue of the power conferred on him by the states, promulgated 'the royal law' (in imitation of the *lex regia* of the lawyers of imperial Rome,) which has ever since been the only fundamental law of Denmark. By this law the kings of Denmark were declared absolute. The effect of the new policy of Denmark did not answer expectation. Christian V. and Frederic IV. were alike unsuccessful in war with Sweden, and the attempt of Christian V., in 1686, to subdue the small State of Hamburg was equally unfortunate.

Frederic IV.] Frederic IV. mounted the throne in 1699. He found the treasury exhausted, and the whole kingdom groaning under accumulated difficulties. But under his government the commerce of the kingdom revived, and the death of Charles XII. in 1718 put a stop to the struggles with Sweden. In 1720 Frederic regained possession of Sleswick, with a sum of 600,000 dollars from Sweden, after which the kingdom enjoyed almost uninterrupted peace for one hundred years. Peace alone, however, cannot heal the wounds which misfortune has inflicted, and a bad form of government perpetuates. Denmark is a State of limited resources, and can only preserve its independence by a course of great prudence and energy.

Christian VI.] Christian VI. succeeded Frederic IV. in 1730. Under his government the commerce of the kingdom increased a little. The Tranquebar company, erected in 1616, was renewed, and the West Indian company purchased the island of St Croix, in the Antilles, from France.

Frederic V.] Under his son Frederic V. who mounted the throne in 1746, and his able minister Bernstorff, the affairs and finances of the

kingdom continued to revive. The lands of the duke of Holstein Plœn reverted to the Crown; but on the other hand, on the accession of Peter III. duke of Holstein, to the throne of Russia, Denmark was threatened with war by that formidable power, Peter wishing to restore to his line the dukedom of Sleswick, to which the Danish monarch had laid claim. The Russian army were already assembled in Mecklenburg, and the Danes in Holstein, when Peter was driven from the throne. On Catherine's accession it was arranged, that her son the grand duke Paul, the heir to the Holstein territory, should renounce his claim to that duchy in favour of Denmark, and should receive in exchange from the latter power the counties of Oldenburg and Delmenhorst. This exchange was confirmed on the grand duke's attaining majority in 1773, so that from this period the whole of Sleswick and Holstein have belonged to Denmark. Paul bestowed his new territories on the younger line of Gottorp in the person of the bishop of Lubec. The great advantage gained by this annexation, was the effectual removal of those grounds of differences which had so often been agitated between the different lines of Holstein and the kings of Denmark.

Christian VII.] Christian VII. had ascended the throne of Denmark in 1766. The early years of his government were disturbed by the affair with Struensee, a man of great talents, and a restless disposition, who had raised himself from the situation of king's physician to that of first minister. Struensee's administration soon became hateful to the nobility and ministry, and a plot having been formed for his overthrow, under the queen's mother, the favourite was disgraced, and soon afterwards brought to the scaffold, with his friend count Brand.[3] The new ministry was displaced in 1784 by the Crown Prince on his assuming the regency during the derangement of the king. The head of the new ministry, Bernstorf, was an able man, and managed the external relations of the kingdom with considerable address. Among other wise acts of the regent, a decree was passed on 16th March 1792, which declared that from and after the commencement of 1803, the slave trade should be held illegal throughout his Danish majesty's dominions. Denmark had thus the honour of being the first of the European powers which proscribed that infamous traffic. During the French revolution, Denmark preserved a strict neutrality, but two Danish frigates having been brought into British ports under English search warrants, Denmark and Sweden joined the northern armed neutrality on the 16th December, 1800, whereupon the English ministry laid an embargo on all ships of these nations, and seized the colonies of both kingdoms. At the same time admirals Parker and Nelson, with a fleet of 47 ships of war, appeared in the Baltic. The Swedish fleet of 7 ships of the line and 3 frigates lay immovable at Carlscrona, while the British fleet passed through the Sound. The Russian fleet could not put to sea, on account of the season; and in the meanwhile the death of Paul changed the politics of Russia, so that Denmark was left single-handed to cope with the power of Great Britain. The Danish fleet lay in the inner harbour of Copenhagen; but a part of it, under admiral Fisher, defended themselves so honourably, that Nelson, after a bloody fight, on the 2d April, 1801, granted the Danes an honourable armistice. On the 23d October, 1801, Denmark and Russia entered into a treaty with England, whereupon the latter power

[3] Struensee was born at Halle in 1737. His father was a clergyman in that city, and latterly in Altona.

restored the Danish colonies in the East and West Indies, while the Danes, on the other hand, withdrew their troops from Hamburg and Lubec.

In 1805, when the fall of Prussia had paved the way for an attack on Swedish Pomerania, and every thing was to be apprehended from the general policy of the French ruler, the Crown Prince drew together his troops in Holstein and Sleswick, but the storm swept past the boundaries of Denmark without touching them, the battle of Austerlitz having decided the war before the struggle in the North could begin. In the following year, upon the formation of the Rhenish confederation, and the dissolution of the German empire, the duchy of Holstein, which had formerly been restored to Germany, was declared to form an integral part of Denmark.

In October, 1806, the French had advanced their armies to Lubec; but they had not yet infringed upon the neutrality of the Danish territory, when the British ministry projected the seizure of the Danish fleet, under the pretext, that it had been arranged at Tilsit to force Denmark into an alliance against Great Britain, and to shut the Sound. A British fleet of 18 ships of the line and 7 frigates, commanded by admiral Gambier, having on board 28,000 troops, under the command of Lord Cathcart, entered the Sound, seeming at first destined to co-operate with the Swedes in the defence of Stralsund, and in reconquering the rest of Swedish Pomerania; and all that was feared, was, that it would arrive too late. This illusion was, however, dissipated on the approach of the fleet, and the arrival of Mr Jackson, the English plenipotentiary, at Copenhagen, who demanded the delivery of the whole Danish fleet, the arsenal, and the fortress of Cronenberg, in deposite to the British. These demands were rejected with indignation by the Crown Prince; whereupon, on the 16th of August the British armament disembarked at Webeck and Kiöge in Zealand, and proceeded to invest Copenhagen. The bombardment began on the morning of the 2d September, and lasted till the evening of the 5th, when 400 houses being laid in ashes, and 2000 inhabitants killed, the Danish General, Peymann, made a capitulation, consenting to give up the Danish fleet in the course of six weeks to the custody of England, till a general peace should be concluded. While this treaty was carrying into execution, the English remained in possession of Copenhagen and the two Holms; and on the 21st October, the British sailed from Zealand, taking along with them the Danish fleet, consisting of 18 ships of the line, 15 frigates, 6 brigs, and 25 gun-boats, after having destroyed the docks. During these transactions, Sweden remained a quiet spectator; but France, Russia, and Austria, protested against the line of conduct adopted by the British ministry, and on the 20th November, 1807, Denmark entered into an alliance with France, and declared war against England, and afterwards against Sweden. The Danish colonies, including Iceland, were thereupon seized by the English; but the Swedish attack upon Norway in 1808 was repulsed.

Frederic VI.] The death of Christian VII. which happened on the 13th March, 1808, effected no change on the political system of Denmark, as his son Frederick VI. had in reality governed for the last twenty-four years. The change in the government of Sweden in 1809, was followed by a peace with Denmark on the *status quo*. The death of Christian Augustus, prince of Sleswick Holstein, who had been named Crown Prince of Sweden, occasioned another change, for although Bernadotte,

who was then named his successor, declared war in 1810 against Great Britain, he changed his system on finding himself placed between the two great allied powers of Britain and Russia, from whom he had most to fear or hope. In 1812, he entered into treaties with England, and had designed, by an alliance with the two powers, to obtain the kingdom of Norway from his weaker neighbour the king of Denmark, as a recompense for Finland. Frederick VI. had already entered into negotiation with England. In 1813 he found himself compelled to defend Hamburg against the French; but count Bernstorff returning at the same moment from London, after an unsuccessful negotiation, and Napoleon gaining the victories of Lutzen and Bautzen, Denmark, on the 18th July, renewed her alliance with France, and engaged to declare war against Sweden, Russia, and Prussia, the two latter powers continuing to insist on the surrender of Norway to Sweden. The Danish army, in concert with the French, occupied Lubec. After the battle of Leipsig, the Crown Prince of Sweden penetrated into Holstein, and compelled the Danes to enter into the peace of Kiel with Sweden and Great Britain, in which it was stipulated, that Norway should be given to Sweden, and the Island of Heligoland to England. In return, Denmark received from Sweden an acknowledgment of the rights of the Sound, the renunciation of the claims which Sweden had upon Denmark, amounting to 12,000,000 of francs; the evacuation of Sleswick and Holstein, and the surrender of Pomerania; and from England the cession of Tranquebar. In February, 1814, Denmark concluded peace with Russia, and in June, 1815, obtained Lauenburg and a sum of money from Prussia in exchange for Pomerania and Rugen. The same year the king of Denmark entered the German confederation, in which he now possesses three votes on the duchies of Holstein and Lauenburg.

CHAP. II.—PHYSICAL FEATURES—SOIL—CLIMATE—PRODUCTIONS.

The appearance of Denmark, particularly of the Islands of Zealand and Funen, and of Sleswick upon the continent, is that of a level country, in general well-cultivated. It affords nothing which can properly be called a mountain; and few eminences, which, in many countries, would be called a hill—the most elevated point rising only 1200 feet above the sea. The coasts are in some parts steep and bold; but, in general, they are low and sandy. In the isles there are some woods, and forests are found in Jutland. Zealand is a fertile and pleasant country, with fields separated by mud walls; cottages either of brick or white-washed; woods of beech and oak, vales, small lakes, and gentle hills. Funen is equally so; and is said to be as well-cultivated as most of the counties in England. Toward the west, where the Jutland peninsula terminates in the Baltic, every thing assumes an aspect of barrenness and desolation. It has been compared to Arabia, without its rivers or its verdant oases; but not without its tempests and sands, which sometimes overwhelm what little feeble agriculture they may have cultivated, and convert the habitual wretchedness of the Jutlander into severe and cruel misfortune.[4] The Danish

[4] For the purpose of consolidating these sands, various kinds of trees and shrubs are planted, to destroy which is prohibited under a severe penalty. They sow also in these places a plant called by botanists *elymus arenaria*, whose spreading roots bind the sand, while its large leaves break the force of the wind.

continent may be described as a vast plain, through which a sandy barren ridge stretches from south to north, commencing in the German counties of Mecklenburg and Lauenburg, and terminating in the extreme north in the promontory of Skagen. The coast of the peninsula is quite flat towards the German Ocean, but intermixed with quicksands, and, towards the Elbe protected by large dams against the encroachments of the sea. Towards the Baltic the land is more elevated, and offers finer and more picturesque points of view than the west coast, which has no wood. The German Ocean has frequently burst through the isthmus which connects the northern extremity of Jutland with the rest of the peninsula. In 1826, three rapid currents united the North Sea with the Lym-fiord, similar devastations have repeatedly occurred along the western coast.

Seas.] The coasts of Denmark are indented by numerous branches of the sea, called *fiords*, or firths, which, in a commercial country, would be accounted very advantageous. Among these, by far the most considerable, is the Lym-fiord, which deserves the appellation of an inland sea. It crosses the northern part of the peninsula of Jutland, from west to east, and joins that part of the entrance to the Baltic which is called the Cattegat or Skagerack. It expands into several extensive bays, contains many islands, and at a very small expense might be made to communicate with the German Ocean. Two other considerable firths are the Staving-fiord and the Schley-fiord. The Sound, or *Oresund*, one of the three Straits which connect the Cattegat and Baltic, does not exceed 1335 fathoms in breadth, between Helsingoer and Helsingborg.[5] It is undoubtedly the most frequented Strait in the whole world. Its depth is from 10 to 19 fathoms; but close upon the coast, and round some of the islands, it is only 4 fathoms. The Great Belt between Zealand and Funen is about 9 miles broad opposite Wyburg, but of very dangerous navigation, on account of its varying depths and sand-banks. The Little Belt is 40 miles long, but not above 2 miles broad opposite Middelfahrt; and, on account of the rapid current which runs from the Baltic into the Cattegat, and the numerous shallows, of dangerous navigation.

Lakes.] The lakes of Denmark are numerous, but none of them are of great extent. The most remarkable are those of Arre, Esrom, Sial, Fuse, and Tiis in Zealand; the Arreskov, and Brendagaard in Funen; the Marienbua in Laaland; the lake of Wyburg, the Long lake, and the Garboal in Jutland; the lake of Plon in Holstein and that of Selent; and in Lauenburg, the lake of Ratzeburg.

Rivers.] The rivers of Denmark are not large; indeed the extent of the country does not admit of great length of course. Zealand and the other islands boast no rivers at all; but only a few small brooks. The most considerable Danish river is the Eider, upon the northern boundary of Holstein—once the *Terminus imperii*, and still separating Germany from Denmark Proper—which, originating near the Baltic, runs westward, and after a course of 56 miles, falls into the German Sea at Tunningen. The Gudensaal has its source between Silkeborg and Halds; running from west to east, it becomes navigable at Randers, and then, turning towards the north, enters the Baltic at Udbye. The other rivers, or more pro-

[5] This breadth is about 100 fathoms less than that of the Hellespont. The ships belonging to the fleet of Harold Hildetond, a celebrated hero of the North, are said to have covered this Strait so completely, that one could have crossed it as over a bridge.

perly rivulets, are numerous; but are so inconsiderable as not to require even enumeration. The Elbe is a German stream, but touches the boundaries of Denmark towards the east of Lauenburg. The Trave, which rises in Holstein and falls into the Baltic, is navigable, and most of the rivers afford convenient harbours and anchorage at their mouths.

Canals.] Denmark has three canals. The canal of Sleswick-Holstein, or Kiel, which unites the German Ocean with the Baltic, is about 16 miles long, and 10 feet deep; it is 54 feet broad at the bottom, and 100 at the surface. This canal is extremely favourable to the internal commerce of Denmark, by rendering unnecessary the long and dangerous voyage round the peninsula of Jutland. The canal is navigable by vessels of 120 tons burden. Its whole expense was estimated at £200,000. The canal of Steckenitz unites the Elbe with the Baltic. The canal of Odensee unites Odensee, the capital of Funen, with the sea. There are only two mineral springs in Denmark; but there are several bathing places.

Climate.] The climate of Denmark Proper is in general humid, and subject to thick fogs, but more temperate than might be expected from the latitude. In winter, however, the cold is frequently severe, particularly in Jutland, and the navigation of the neighbouring seas is prevented by great quantities of ice. The summer is often oppressively warm. The humidity of the atmosphere is, however, particularly advantageous to Denmark, as one-half the soil consists of a light sand, which would otherwise be quite sterile. The average temperature at Copenhagen is 6° of Reaumur; but the cold in winter is often so severe that the Sound freezes. Upon a mean of 26 years, it rains 130 days in the year, and thunders 13. The summer begins with June and ends with September. Upon the whole, the climate appears not less propitious to human life than to the vegetable kingdom, as instances of longevity are very common throughout this kingdom.

Soil.] The soil is of various qualities, but the prevailing character is the sandy. In some parts it consists of a very rich mould, called *marsch*, of which the component substances are marle and a bituminous matter. The soil in the island of Alsen and Anglen is chiefly composed of a very rich vegetable mould. Marshes are found every where; the whole of Vendsyssal is one continuous marsh.

Vegetable Productions.] The southern parts of Denmark, and the larger islands in the Baltic, are well-cultivated; agriculture, favoured by the soil and the nature of the country, has there arrived at considerable perfection. Zealand chiefly produces barley and oats; Funen, buckwheat; while wheat is confined to Laaland and Holstein. In Holstein, and the southern parts of Jutland, the soil is fertile. Potatoes are becoming very common in Denmark. The *festucea fluitas* yields a fine flour, while the plant feeds horses. This plant thrives in marshes. The most celebrated grazing tracts are found in the province of Holstein, and on the east coast of Jutland. The soil in the islands generally consists of a good clay, more or less mixed with sand lime. From the Elbe to Jutland, the land is taken from the sea, and is low, flat, without stone or tree; it consists of a very fine fruitful blue clay; and produces wheat, barley, cole, and large fields of grass. The middle part is more sandy, but abounds with small rivers. It produces rye, oats, and *phagopyrum*. The eastern coast is diversified with small hills, and overgrown with trees; and consists of a yellow clay, more or less mixed with sand. It

produces rich harvests and excellent pasturage, the butter made from the milk of the cows fed on which is excellent, and keeps better than that of most other countries. Among the garden-fruits are apples, cherries, and nuts. The plants common in Denmark Proper differ not in many respects from those of Prussia. Hemp, flax, and madder, are grown.

Animals.] Denmark produces horses of a very good breed, particularly those of the district of Anglen; and remarkably fine cattle. Sheep and swine are common; goats and asses are rare. The large Danish dogs are of a particular species, and celebrated for their strength and fidelity. There are also stags, deer, roes, hares, and a variety of game; but very few fur-animals. Wild fowls are very numerous. Among these, the eider duck deserves particular notice, on account of its valuable down. The seas abound in fish. In both the Belts, are caught small but very fat herrings; which are salted and smoked, and then exported, in large quantities, to Germany. Many lakes, rivers, and artificial ponds, abound in excellent eels, trout, pike, and lamprey. In Holstein, the landholders will sometimes draw fish to the value of two or three thousand francs annually, from their fish ponds. There are banks of oysters near Skaken, and in the western coast of Sleswick.

Minerals.] Denmark Proper being generally a level country, cannot be supposed to abound in minerals; though it is thought that iron and coal might be found were they carefully sought for. Bornholm has porcelain clay. Tripoly and fuller's earth have been found in Jutland, and chalk is afforded by Moen. There are also vitriol, coal, and amber.

CHAP. III.—AGRICULTURE—COMMERCE—REVENUE—AND MONIES.

Agriculture.]—DENMARK is an agricultural State; but nature has not particularly favoured it either in the fertility of the soil, the benignity of the climate, or the spirit and industry of its inhabitants. There are, however, many districts, which might by proper attention be rendered extremely fruitful, and almost none which are wholly unsusceptible of culture. The system of agricultural operations pursued in Denmark, is pretty nearly the same as that of the north of Germany, though not conducted with the same skill. Since the abolishment of servitude, agriculture has made considerable progress, but it has still to struggle with many difficulties. Holstein and Lauenburg are the best cultivated districts. Laaland and Falster are indeed fertile; but there, as well as in the beautiful plains of Zealand and Funen, agricultural skill is little known. Sleswick has a very good soil on the east and west coast; but a great portion of its soil is barren heath; and Jutland is behind all the other provinces, except in the rearing of cattle. It is asserted, that out of 100,000 bullocks, that are sent from Denmark annually, Jutland furnishes 80,000. The corns chiefly cultivated, are wheat, rye, barley, oats, buck-wheat, and pease. Besides raising enough for home-consumption, Denmark exports grain to the value of six or seven millions of florins annually. The corn, however, is not of the finest quality. The cultivation of flax, hemp, and hops, is limited, and does not supply the home-consumption. A good market for fruits might be found in Petersburg, and the northern cities of Europe, but their culture is much neglected. The

rearing of cattle, is upon the whole, conducted with more skill than the raising of corn. The light lively Danish horse, is much esteemed; and the heavy Holstein steed, makes an excellent coach-horse. The king has two fine studs at Friedricksburg and Jägerpriess; and the wealthy nobility occasionally possess well-filled stables. According to Olafsen, there are perhaps in the whole of Denmark, exclusive of Lauenburg, 554,000 horses, of which 500,000 are employed in draught, and 15,000 to 16,000 exported annually.[6] A great quantity of butter is manufactured in the kingdom; but the cheese is chiefly consumed in the country. Sheep are kept chiefly for the butcher. Fisheries form a considerable object of Danish industry; the mouths of the rivers and fiords abounding in fishes, although the shoals of herrings no longer barricade the passage from Zealand to Schonen. The most considerable fishery, is that of herrings in the Lymfiord, which produces yearly, about 100,000 Dutch florins. There are also stockfish, salmon, eels, flounders, oysters, mussels, and lobsters. A considerable number of seals and porpoises are killed upon the coast and in the Eider; in 1815, the fisheries produced 1,078,125 florins. In ancient times, Denmark was covered with large forests; but they have almost entirely disappeared, and a great want of fuel is every where experienced. In some districts where the peat-fuel fails, the inhabitants are obliged to use sea-weed and straw as substitutes for fuel.

Manufactures.] There are a few hands employed in the manufacture of woollen stuffs; excellent leather is made, and the gloves of Randers and Odensee are much esteemed, and exported in considerable quantities, under the name of *gants gross*. By a late return, the number of sugar-refineries in the Danish dominions, was 46; that of paper mills, 32; iron founderies, only 4.

Commerce.] Denmark is favourably situated for commerce between the Cattegat and the German Ocean and Baltic. In the long dark foggy nights of winter, the Cattegat is indeed one of the most dangerous seas in Europe, and the difficulties of seamen are often increased here by the ice which interrupts the navigation for about four months annually. But on the other hand, nature has given to Denmark an almost exclusive monopoly of commerce with Sweden, Norway, and the Baltic provinces; countries in which it can dispose of nearly all its surplus grain. The interior commerce is chiefly maintained by small coasting vessels, Holstein and Lauenburg possessing the only considerable traffic by land. The foreign commerce of Denmark, extends to almost every region of the earth. The long neutrality of Denmark, under a war which agitated all the rest of Europe, raised a commerce, already employing 250,000 tons of shipping, to an extraordiuary height; the most distant shores of Asia, those of Africa and America, and of the East and West Indies were visited by its ships, and Danish vessels from 1200 to 1500 tons burden, sailed annually for China; but the misfortunes which at last overtook this country, nearly annihilated the advantages which it had gradually acquired, and from 1807 to 1810, the Danish navy sustained a loss of 900 ships. The principal articles of import, are cotton, tea, wine, brandy, salt, and soft goods. Copenhagen is the emporium of Danish commerce; but this

[6] Pursuant to the laws of the realm, it is prohibited to employ stallions unless they be 20 hands high. In some small islands of Denmark, there is a breed of wild horses.

city is less favourably situated than either Tunningen or Altona for the seat of trade. The commercial code is liberal and wise. There are several commercial companies, such as the Asiatic company, the Fishery company of Altona and Copenhagen, and several Banks and Societies of Insurance. The whole commerce is regulated by a Tribunal of commerce.

Revenues.] The Danish revenues are derived from customs, duties upon exports and imports, an excise on provisions and liquors, a poll tax upon the inhabitants of Denmark Proper only, a tax on places under government, a land tax, a quitrent from the royal demesnes, licenses for distilling and retailing spirits, and for permission to hunt in the royal manors, from the mines, stamped paper, and various other sources.

By the Sound duties, are understood the duties levied on such vessels as pass the Sound, at the entrance of the Baltic. The number of vessels which passed the Sound in 1782 was 8,465, of which 1,264 were British. In 1824, 10,509 vessels sailed through the Sound, and in 1827, 13,006, of which there were 5099 British; 2035 Prussian; 871 Danish; 867 Norwegian; 1389 Swedish; 457 Hanoverian; 380 Russian; 811 Dutch; 551 Mecklenburg; 192 American; 65 Bremen; 100 Lubec; 37 Oldenburg; 35 Hamburg; 106 French; and 11 Portuguese.[7]

The following is the proportion of contribution in Danish florins:

Denmark contributes,	5,580,000
Sleswick and Holstein,	3,200,000
Lauenburg,	120,000
West Indian Islands,	500,000
Sound Duties,	800,000
	10,200,000

In former years, the expenditure of the government greatly exceeded the revenue. Later restrictions have probably placed them on a par.—The national debt of Denmark has been estimated at one hundred millions of florins, of which about fifteen millions are foreign debts; the remainder being due to citizens.

Monies.] The greater part of the Danish currency consists of paper-money. During the war, the Danish government issued paper-money, in notes of 100, 50, 10, 5, and 1 rixdollar, to the extent it is said of 57,000,000 of specie dollars, while almost all the metal currency disappeared from circulation. The rixdollar is equal to the Russian ruble. It is divided into 6 marcs of 16 skillings each.

Weights.] The Danish pound weighs 7715 English grains: hence, 100 pounds of Copenhagen are equal to 110 pounds Avoirdupois. The Danish lippund is equal to 16, and the shippund to 320 pounds English.

Measures.] The Danish yard is one-third shorter than that of Holland and England: its length being 27.7 English inches. The Danish mile contains 12,000 yards, or 8,233 English yards.

[7] Nothing can more satisfactorily illustrate the good effects of the reciprocity system than the progress of our shipping in the Baltic trade, compared with that of the other countries with which treaties of commerce have been recently entered into; viz. Denmark, Sweden, Norway, Prussia, Hamburg, Bremen, and Lubec. The increase during the last year, compared with that of 1826, on the number of vessels belonging to those countries which passed the Sound, was at the rate of 5 per cent., whilst that of English vessels was 37 per cent.

CHAP. IV.—INHABITANTS—MANNERS AND CUSTOMS.

WITH the exception of about 6000 Jews, the population of Denmark is entirely of German derivation. There are three branches of the original stem in this country: viz.

Danes.] I. The Danes occupying the Islands, Jutland, and a small part of Sleswick, and speaking a language undoubtedly a dialect of the German, and of easy acquisition, (except as regards pronunciation,) either to a Dutchman, a German, or an Englishman. The Danes have regular and well-formed features; frequently fair or brownish hair, blue eyes, and a body capable of sustaining great fatigue. The women are of a more delicate frame. Their complexion is dazzlingly white; but, upon the whole, their features are destitute of animation, and soon after twenty-five, they begin to lose their charms. There are a great many good traits, as well as defects, in the character of the Dane. He is gallant and brave, a spirited sailor or soldier, but averse to enterprise; he is full of patriotism, but cares little for national renown; an enemy to slavery and arbitrary power, he nevertheless yields implicit obedience to a despotical constitution; he is persevering when once engaged, but too phlegmatic to be easily roused to action. The lower classes choose rather to live dependant on charity than to support themselves by honest labour; and this spirit prevails among the working-classes as well as peasantry. The Dane is benevolent, but this benevolence is one fertile source of the prevailing idleness; he is hospitable, but by no means serviceable; he is fond of comfort, but cares little for magnificence; he has less cordiality and confidence than the German, but more obstinacy; he is more economical, but at the same time more selfish; he is an acute observer, a calm reasoner, and frequently gifted with a vivid conception. The Danes usually follow the French fashions, and the language of that nation is very general in Denmark and Norway.

Germans.] II. The German population is settled in Holstein, Lubec, and the greater part of Sleswick; their language is also predominant as far as the boundaries of Jutland, and is much used in company and at the post-houses. However, according to a royal decree, the Danish language is about to be most absurdly forced upon the whole of Sleswick, although there is only a small part of the population of that district able to speak it!

Frises and Angles.] III. The Frises and Angles, two German tribes, are located on the west coast of Sleswick and the islands of the German Ocean. But it is only in the bailiwicks of Tondern and Bredstedt, and in some of the islands, that the Frisian language is spoken in its purity. The other Frises speak a kind of Low German, and the Angles a corrupted Danish. The Frises are distinguished from the other inhabitants of this kingdom by ruder manners, and a kind of national pride, which looks with contempt on the other citizens of the State. They are partly agriculturists, partly sailors and fishermen. The inhabitants of the Ditmarschen in Holstein are evidently related to the Frises. The Angles occupy the land between the Bay of Flensburg, the Baltic, and the Schley, and amount to about 30,000. They are marked by a strong physical frame, and high notions of liberty and national honour. They are an industrious race, and distinguished by their good morals. We shall speak of the inhabitants of the Feroe islands, and of Iceland, in treating of the topography of these places.

Gypsies.] The people which go by the name of Bohemians in France, of Gypsies in England, Gitanos in Spain, Ziguener in Germany, and Zingari in Italy, are in Denmark, Norway, and Sweden, called *Tatere* or *Taterne*. The old Danish laws are very severe in their enactments against this vagabond race; the Norwegian directs the confiscation of any vessel bringing them to the country. In the Danish islands there are few—more in the not very thickly peopled district of Jutland. In the northern part of this province is a race of people whose descent is traced from the gypsies, and who are called *Kieltringsfolk* or *Natmændsfolk*. It consists of about 200 persons, one half of whom have fixed dwellings, employing themselves in skinning cattle, sweeping chimneys, and such uncertain offices; the other half wander about, and are the dread of the country, on account of their thefts and revengeful dispositions.

Ranks of Society.] The inhabitants of Denmark have been divided, according to their ranks, into five classes: viz. 1*st*, The nobility, who have privileged fiefs in the kingdom, from which they derive their nobility. 2*d*, The titular nobility; to which class belong the companions of the two Danish orders of knighthood, namely, the order of the Elephant, and the order of Dannebrog,—those counts and barons who are not possessed of counties and baronies,—and the persons filling the higher offices of the state; all of which—whether civil, military, or ecclesiastical—confer on those who hold them a certain nobility during their lives. 3*d*, The inferior clergy, lawyers, and students. 4*th*, The merchants and citizens of great towns. And, 5*th*, The seamen and population engaged in agriculture; the latter exceeding one million in number. The proportion of paupers in Denmark is said to be 3 per cent., which is only the fifth of that of Holland.

Manners and Customs.] It has been affirmed—and, we believe, with much truth—that before the government of Denmark was made hereditary and absolute, the nobility and gentry of that country lived in great splendour and affluence. Their country-seats were magnificent, and their hospitality unbounded; and when the States were annually assembled, they met their sovereign with retinues as numerous and brilliant as his own. They are now said to have greatly declined in magnificence of living, and to diminish daily in number and credit. Still, however there are many families which exhibit all the elegance and refinement visible in the best European society; and amongst the nobility generally we meet with considerable remains of ancient stateliness. Sumptuous burials and monuments are very common; and it is even usual to keep the corpse of a person of quality in a vault, or in the chancel of some church, for several years, till a fit opportunity offer itself for celebrating the funeral with becoming magnificence. Extravagance of every kind is still a very general disposition of the Danes, The food of the lower classes consists chiefly of oat-cakes, rye-bread, fish, and cheese; but the tables of the wealthier classes exhibit the usual profusion of European luxuries. Clarke, to whose keen eye we are indebted for many lively and sagacious observations on national characteristics and manners, observes, that a journey from London to Copenhagen, might exhibit the retrocession of a century; every thing being found, in the latter city, as it existed in the former a hundred years before,—an observation extending not only to the amusements, the dress, and the manners of the people, but to the general

state of every thing connected with Danish society; excepting, perhaps, the commerce of the country, which is upon a good footing.

CHAP. V.—GOVERNMENT—LAWS—ARMY AND NAVY.

We have already had occasion to mention that the government of Denmark, like that of most of the Gothic nations, was originally an elective monarchy; the right of election being vested in the three estates of the kingdom—the nobles, the clergy, and the commons—who exercised the supreme legislative authority by means of representatives assembled in diet, while the executive power was vested in the king and a senate composed of the higher nobles. Such was the equable and wise constitution of Denmark until the year 1660, when, as already mentioned, the two inferior estates, to punish the tyranny of the nobles, renounced their most precious birthrights as citizens of a free State, and placed their liberties in the hand of an unlimited hereditary monarch! The fundamental laws of the Danish constitution are: 1*st*, The Act of Sovereignty, (*Enevolds—Arve—Regierings—Akten,*) presented in 1661 to Frederic III. It consists of forty articles; of which the following are the most remarkable: "The hereditary kings of Denmark and Norway shall be in effect, and ought to be esteemed by their subjects, the only supreme head on earth: they shall be above all human laws, and shall acknowledge, in all ecclesiastical and civil affairs, no higher power than God alone. The king shall enjoy the right of making and interpreting the laws,—of abrogating, adding to, and dispensing with them. He may also annul all the laws which either he or his predecessors shall have made, excepting this royal law, which must remain irrevocable, and be considered as the fundamental law of the State. He has the power of declaring war, making peace, imposing taxes, and levying contributions of all sorts," &c. &c.! 2*d*, The king's law, (*Konge loven,*) pronounced in 1765, defining the royal prerogatives and obligations. 3*d*, The Act of citizenship, (*Ind fots retten,*) promulgated in 1776, by which it is declared that none but natives shall be eligible to civil or military employments under government. On joining the German confederation with the provinces of Holstein and Lauenburg, the king of Denmark undertook to give a constitution to these States. It is stipulated that the king must subscribe the Augsburg Confession of Faith. The crown is hereditary in the male and female line. The monarch is of age at 14, and the nearest prince of the blood may become regent at 18 years of age. The nobility possess peculiar privileges: which are, however, more properly attached to the right in the soil; for, in general, it is only the nobility who are able to acquire property of this description. In the duchies, landed property is accessible to all ranks. The arms of Denmark are the Dannebrog cross, which divides the shield into four fields, occupied by the emblems of the different provinces. The noblest order is that of the Elephant, founded in 1580.

Administration.] There is no government in Europe where the fundamental laws authorize such an unlimited monarchy as Denmark; nevertheless, there are very few States in which greater practical freedom exists. Every thing in the political and juridical constitutions is so much

regulated here by forms and customs, that the Danes justly look upon these forms as forming a body of political privileges which could never be violated with impunity by the king or his ministers. The highest tribunal of Denmark is the privy council; which is usually composed of the great officers of the State, and the princes of the blood. All the higher affairs of government—with the exception of the distribution of patronage, which the king keeps in his own hand—are conducted by this council. The minister of state is assisted in the discharge of his functions by two chancellories: one for Denmark, and another for the duchies. Denmark Proper is divided into seven bailiwicks, or *Stifts-ampts*—the sees of as many bishops—each of which is subdivided into under bailiwicks, and these last into *Herreders*. Sleswick and Holstein have a special governor; Lauenburg has a special governor and government. Iceland forms a single bailiwick with its own administration, and the Feroe Islands are included in the bailiwick of Zealand. The colonies are superintended by governors.

Laws.] The laws of Denmark are remarkable for their equity, plainness, and brevity.[8] The natural consequence of which is, that in this country, lawsuits are rare, and the legal profession by no means lucrative. The present code is the *Dansk-lov*[9] of Christian V. founded on the code of Valdemar. There are also a code of ecclesiastical regulations and military law, and a collection of royal ordinances amounting to above forty volumes. The duchies of Sleswick and Holstein have reserved their own separate institutions and laws; and several districts and towns have their own peculiar provincial laws. The Roman and Canon law, as well as the Longobard Institutions, are in use in Lauenburg. Murder is punished with death by the Danish criminal law; but robbery, housebreaking, theft, and other crimes, which in Britain are too often visited with capital punishment, are here punished by imprisonment or condemnation to hard labour.

Police.] The Police is very strict and effective throughout his Danish majesty's dominions. Mr Rae Wilson gives us a curious instance of this, in the case of the theatre. Not the slightest interruption occurs throughout any part of a new performance; but the moment the curtain is dropped on its conclusion, a roar or yell is set up by those who are dissatisfied, while others, who are favourable towards it, express their approbation as loudly by clapping and cheering. This competition commences in the pit, where all stand up and carry on the warfare, looking round the house, and striving to get others to join their party. For the time, the whole theatre is in an uproar, equally as great as that which took place during the O. P. rows at Covent Garden. These hostilities are permitted to endure for five minutes, by which time it is determined if the piece is to be repeated or to be condemned. Three strokes are then given on a gong from behind the stage as a signal that the period allowed for this expression of the public opinion is expired, when in an instant silence is restored, and the spectators depart. After this, the police are

[8] Very great advantages have resulted from the tribunals of conciliation established in 1795, and the introduction of justices of the peace. If these tribunals succeed in reconciling the parties, the agreement is registered, and it has then the same validity as the sentence of a court of law; but if they fail in this object, the proceedings are to be regarded as never having taken place; no record is made, and no expenses are incurred.

[9] It is comprised in one quarto volume, written in the language of the country, and divided into six books.

justified in apprehending any person who attempts to renew the contest. In some cases this has actually occurred.

Ecclesiastical Government.] The government of the Lutheran church of Denmark appears to form a medium between the English hierarchy, and the discipline of the Calvinistic church. The Danish church has no archbishop; and the bishops have no temporal jurisdiction. The bishop of Zealand, who has the first rank, is considered as metropolitan. The following are the bishoprics of Denmark Proper: Zealand, Odensee, Laaland, Aarbuus, Aalborg, Wyburg, and Ribe. Holstein and Lauenburg are formed into superintendencies according to the plan of the Lutheran church. The inferior orders of clergy consist of archdeacons or provosts, to whom belong the inspection of the districts into which the different dioceses are divided; parish priests, who officiate in the parish churches; and chaplains, who officiate in the chapels of ease, which are common in large parishes. The livings of the parish priests consist of their glebe, tithes, and surplice fees, aided, in some places, by voluntary donations from the people. In Denmark Proper, the livings of the clergy seldom exceed £400 yearly, and are seldom below £60. In Jutland, however, there are livings so low as £20 annually. In some parts, the holders of privileged lands are the patrons; in others the parishes; there likewise exist in Denmark several nunneries or asylums for the unmarried females of noble families, who are thus enabled at a small expense to enjoy an elegant and pleasant retirement.

Army.] The Danish army, which in 1809 amounted to 107,335 men, is now reduced to 38,829, consisting of

Staff officers,	47
Engineers,	21
Artillery,	4,433
Cavalry,	3,302
Infantry, including the Guards, the Militia of Copenhagen, and the garrisons in the Colonies,	31,026
	38,829

Besides these regulars, there is an armed militia in the provinces, which can be summoned in cases of emergency. The contingent for the German confederation, from the duchies of Holstein and Lauenburg, is fixed at 3,600 men. The regular troops are chiefly composed of natives; and the quota is fixed in rather a curious manner, each district supplying one recruit for every 32 tons of corn reared in it. The period of service is twelve years. There are two arsenals, one at Copenhagen, and one at Rendsburg. The principal fortresses are Copenhagen, Cronenburg, Korsör, Nyburg, Friedericia, Friedrichsort, Rendsburg, Fladstrow, and Friedrichshaven. There is an hospital of invalids at Ecernförde, and an academy for cadets of artillery, and another for those of the regular troops at Copenhagen,

Navy.] The Danes have, with justice, been considered as more expert seamen than either the Russians or the Swedes, a qualification owing chiefly to their insular situation, and to the great extent of sea coast which belongs to them. They were formerly the most expert sailors of Europe, but have long been surpassed by many of their southern neighbours. Denmark long possessed a considerable navy, though it affords few of the materials necessary for ship-building. But, the events of 1807, after the loss so lately sustained from Lord Nelson's expedition, nearly annihilated

the Danish navy. In 1819, the whole Danish navy, with all the ships in the colonies, amounted only to 5 ships of the line, 7 frigates, 1 cutter, 1 schooner, 1 floating battery, and about 20 smaller vessels of war. There are two hospitals for naval invalids, and an academy of marine cadets instituted in 1701. The naval magazines and docks are situated upon the holms at Copenhagen.

CHAP. VI.—ESTABLISHMENTS FOR EDUCATION—LITERATURE.

Universities.]—DENMARK possesses a number of educationary establishments, among which we notice first the universities of Copenhagen and Kiel. The former of these was founded in 1479. It has one rector, and four faculties; viz. theology, law, medicine, and philosophy, embracing 20 ordinary and 16 extraordinary professors. The university of Kiel was founded in 1665, by the Duke Christian Albrecht of Holstein.

Schools.] There are a number of gymnasia, or high schools, in this kingdom; and every town and village possesses a first or priming-school. Since 1819, the Lancasterian method has been introduced under the especial patronage of the king, and adopted by above 1700 schools. Many of the schools are military, and in these gymnastic exercises have been introduced. Under the auspices of the philosophical society of Copenhagen, lectures on experimental philosophy, with a view to the improvement of agriculture, manufactures, and the arts, are about to be established in all the principal towns of Denmark. There is a seminary at Copenhagen for instructing the teachers of the gymnasia, and a number of pedagogical institutions throughout the kingdom. The young nobility are educated at Seröa. Besides these, there are surgical and veterinary institutions, and one or two schools for the deaf and dumb. The rudiments of drawing and singing are also taught in several of the schools.

Literary Institutions.] The royal academy of sciences at Copenhagen was founded in 1743, by Christian VI. It has published many volumes of transactions. In 1763, a society was instituted for the advancement of the fine arts. A society for the cultivation of Northern history and Scandinavian literature was erected in 1797, and has likewise published several volumes of its labours. Another society has been instituted for the purpose of inquiring into the literature of Iceland; and a private society directs its attention to the extension of natural science. In 1809, a society was founded, under the name of Olafsen's literary society. In 1810, a society for natural history and language was established. There are likewise the royal medical society of Copenhagen, founded in 1772; the royal agricultural society, founded in 1769; the royal society for the advancement of the veterinary art, established in 1807; a society for the advancement of national industry, founded in 1808; and the patriotic society of Sleswick and Holstein, founded in 1812. The royal library at Copenhagen contains 260,000 volumes, among which are 30,000 volumes printed previous to the date 1500, 30,000 manuscripts, and 50,000 duplicates. The Olafsen library at Copenhagen contains 25,000 volumes. The library of the university at Copenhagen possesses 40,000; that of Kiel, 30,000 volumes; and both universities contain cabinets of natural history and observatories.

Scandinavian Literature.] Before noticing the modern Danish literature, we must briefly advert to the literature of ancient Scandinavia, comprehending the earliest literary monuments of Denmark, Norway, Sweden, and the islands of Feroe, Orkney, Shetland, and Iceland. This literature has been traced back to very remote antiquity, and descends to those times when the last traces of paganism were effaced under the footsteps of Christianity. Its history is of extreme interest to Germany and England, both which countries having been christianized at a very early period, possess no other literary relics of their pagan ancestors than those which have been preserved in the extreme North. The most remarkable circumstances attending the Scandinavian literature is, that it has not only preserved the ancient versification peculiar to all German nations, but likewise a distinct mythology, which in elegance of fancy, and boldness of conception, almost equals that of ancient Greece. Nor is it the versification and mythology alone which distinguish this literature: its invaluable historical and legislative fragments, and unique Runes,[10] open up a wide and rich field of inquiry. Julius Cæsar, Lucan, and Tacitus, notice the wild and fanciful mythology of the North; but a wide and dreary chasm occurs between the age of these historians, and the next mention of Scandinavian literature. In the 8th century, a few relics were saved from destruction by the Longobard author, Paulus Diaconus, who recites, from the traditions of his countrymen, a dialogue between Wodin and Freya. The denomination of the days of the week from the divinities Tyr, Woden, Thor, and Freya, must have been very early adopted, as they were so familiarly known in Charlemagne's time, that in giving new names to the months, that prince did not attempt to change the names of the days of the week. Nearly 300 years had elapsed when Adam of Bremen, who died in 1076, in his work *De Situ Regnorum Septentrionalium*, mentions a temple at Upsala erected to the gods Thor, Woden, and Freya. In the latter half of the 12th century, Saxo Grammaticus, a Dane by birth, wrote a historical work in sixteen books, entitled *Historia Danica*, which is a miracle of erudition for that age. Saxo's merits long remained hidden in obscurity, and a like unworthy fate was shared by three Icelanders, his contemporaies; viz. Samund Frode, who died in 1133; Are Frode, who died in 1148; and Snorro Sturleson, who was murdered in 1241. The darkness which rested upon the literature of the North,

[10] The date of these ancient alphabetical characters called *runes*, has occasioned a good deal of controversy among scholars; some placing their invention at a period many centuries antecedent to the Christian era, and others, apparently with more justice, referring it to a later period. However, we can hardly adopt the opinion of those who fancy that they can trace the *runes* to the Roman alphabet. The similarity of some of the characters proves nothing, as it occurs only in a few, and in others has no place. Besides the Runic alphabet has only sixteen characters, which it is not likely could have been the case had they been imitated from the Roman alphabet. As it is not very probable that the rude nations of the North, who remained so long in the grossest ignorance, should have discovered for themselves a peculiar mode of writing, the hypothesis of Frederick Schlegel, in his lectures on ancient and modern literature, seems not at all improbable. According to that ingenious critic, the Phœnicians, who at a very early period had pushed their commercial enterprise into the Baltic, must have taught the inhabitants of the surrounding provinces the use of written characters, and the *runes* were first fashioned from the ancient Phœnician alphabet, and preserved by the priests in their sacred or magical writing. The similarity already mentioned scarcely affects the hypothesis, for the Romans themselves derived the characters of their alphabet from the same eastern source. This opinion is confirmed by the fact, that in Spain and other countries of the S. W. of Europe, anciently peopled from the North, there are frequently found stones engraved with Runic characters.

was only slowly withdrawn, even after the introduction of printing, as that invaluable art found its way into Denmark at a comparatively late period. The first printed work, viz. *Exequiæ Frederici Secundi, Danai regis*, bears the date of 1590. The 15th century witnessed the discovery of the invaluable treasures of Scandinavian literature. The parchment MS. of the prose or later Edda, written by Snorro Sturleson, was the first relic which attracted the attention of the learned of Europe. In 1628, Arngrim Johnson, a learned Icelander, forwarded to the celebrated physician Ole Worm, the MS. of the later Edda, with its appendix, the Scalda, now preserved in the University library at Copenhagen. Ten years afterwards, another Icelander, Brynjulf Svenson, discovered a MS. of the poetical or earlier Edda. In these Eddas, the whole Northern mythology is developed. The most ancient Edda is supposed to have been collected by Samund Sigfussom, a learned Icelandic priest, and Are Frode, the most ancient historian of the North. It consists of a series of songs of the Scalds, besides a variety of ancient traditions; and it would appear, that the younger, or prose Edda, was extracted from the ancient work, by Snorro Sturleson.

Danish Literature.] Modern Danish literature has kept pace with, or rather followed that of Germany, the literature of the duchies being almost exclusively German. Danish literature is confined to a very limited circle. However, Denmark has produced scholars whose names would confer honour on any nation; and the number of her skilful lawyers, physicians and divines, is not small. Philosophy has employed several acute scholars; but the greater number have devoted themselves to the study of ancient and modern languages. The learned Danes generally speak very elegant Latin; German is almost universally understood and spoken, and even French and English are very generally known. The physical sciences, chemistry, and natural history, are not neglected; but we do not find any distinguished name in these walks of learning. In mathematics and astronomy, a very high rank must be given to Tycho Brahe, who stands undoubtedly at the head of Danish science. Thom Bugge is also an eminent name in science. In history, Pontanus and Duhm are distinguished; in geography, Pontoppidan, Djurberg, Thaarup, Nyrup, Schlegel, and Malte Brun, who though he has not written in Danish, was a Dane by birth; and in political science, several Danes have been distinguished, among whom we will only name Olafsen. The modern Danish poetry begins with popular songs and hymns; but its dawn can only be reckoned from Louis Holberg. He was followed by several esteemed poets, as Ewald, Rahbeck, Tode, Nordahl Brun, and, above all, the spirited Jens Baggesen. Danish literature is particularly rich in dramatical works, and almost all the above mentioned poets have also written Dramas. Oelenschläger is a Dane, though his dramas are written in German. In the fine and plastic arts, Denmark possesses few distinguished masters; but Thorwaldson will be ranked among the first sculptors of the age, and Jual holds an eminent rank among painters. In 1814, there were 195 new works published in Denmark, and 244 the preceding year, but the greater part of these works were written in German. The first journal published in Denmark appeared in the year 1644. This was soon followed by several others, one of which was in verse! There are at present 80 periodical works, published daily, weekly, monthly, and quarterly in Denmark, of which 70 are in the Danish language. The censorship is said to be liberal

CHAP. VII.—TOPOGRAPHY OF DENMARK PROPER.

General Topography] In the political administration of Denmark, the kingdom is divided into three parts, the first comprehending the kingdom of Denmark Proper; the second the three duchies of Sleswick, Holstein, and Lauenburg, which belong to the German confederation, and possess different laws, constitution, and language from those of Denmark Proper; and the third embracing the Feroe Islands, and Iceland, which are considered as foreign colonies. The kingdom of Denmark, consists of the Danish islands and the peninsula of Jutland. It is divided into seven bailiwicks.

1st, Zealand.] The bailiwick of Zealand, or, as it is written in Danish, Sealland,[11] comprehends, besides that large island, those of Amak, Saltholm, Scyerde, Amoe, Agersöe, Möen, Samföe, and Bornholm.

The principal island is entirely flat, and, except in a small part of the coast, very little elevated above the level of the sea. The soil is evidently a deposite of shells, mixed with sand, clay, and flint, and the whole covered with a strata of fertile vegetable mould. Here and there, at considerable depths beneath the surface, occur large blocks of granite,—a phenomenon which has given rise to a variety of speculations among geologists. Several inland lakes occur in the N. E. and a number of small rivers or *Asas*. The climate is damp and variable, but very mild and favourable to vegetation. The winter is long and rainy; but seldom severe enough to freeze the surrounding straits, which are only blocked up during winter by the shoals of ice from the Cattegat. Summer commences in June, and terminates in August, when high winds begin to blow. The territorial surface of this bailiwick amounts to 3103 square miles, and the population is estimated at 350,000 of whom about 96,000—including the garrison and 2400 Jews—reside in the capital.

Copenhagen—called by the Danes, *Kioebenhavn*—the metropolis of the Danish dominions, is situated on a low and marshy promontory on the east of the island of Zealand, where the island of Amak forms a small bay. It formerly belonged to the bishop of Roeskilde, and did not become the residence of the Court till 1443. None of the cities of Northern Europe equal Copenhagen in their appearance. Some of them, particularly Petersburg, have a few buildings which excel any thing to be seen in Copenhagen, but in general neatness they are greatly deficient. Wooden edifices, so common in the North, are here unknown, that material being forbidden to be used for building; and that mixture of elegance and meanness, which gives to the greater part of northern cities an appearance somewhat grotesque, is seldom to be met with in Copenhagen; the greater part of the buildings are of brick, many of them are of stone brought from Germany, and some of the finer edifices are of Norwegian marble. The circumference of the city is about five miles; it is regularly fortified towards the land, and is protected by strong works towards the sea. The town is divided into three parts, viz. the Old and the New town, and Christianshaven. The streets, though narrow, and consequently ill-fitted for the accommodation of the crowd of a metropolis, are in general well paved, and have on each side a pavement for foot passengers. There is a beautiful octagon, called Frederic's place in the New Town, ornamented with a statue of Frederic V. The royal family

[11] The land surrounded by the sea.

reside there. The houses of the numerous nobility are elegant, but were greatly surpassed by the royal palace founded by Christian VI., and unfortunately destroyed by fire, in 1794. The city has several times suffered severely by fire, but owes to that circumstance great part of its present neatness and elegance; since measures were taken to rebuild, in the most commodious manner, such parts as had been destroyed. Of these fires, the most dreadful was that of 1728, which laid in ruins 5 churches and 67 streets. That of 1794, burnt down 1000 houses. This was followed by another in June, 1795, little less destructive; and in the attack by the British in 1807, 305 edifices, including the cathedral and part of the university were destroyed, while upwards of 2000 were damaged. In 1815, there were five markets, three royal palaces, sixteen churches, one Catholic chapel, one Moravian, one synagogue, three Protestant nunneries, thirteen hospitals, thirty poor-houses, and 4054 houses, in Copenhagen, with a population of 85,000. Many of the streets of Copenhagen have canals, and a considerable commerce is carried on in the city. The number of inhabitants employed in manufactures is computed at 13,300; and the number of great commercial houses exceeds 80. The harbour is convenient, and capable of containing nearly 400 vessels. It is annually visited by about 5000 ships. The amusements of the capital differ little from those of other great cities. There is a national theatre, a philharmonic society, a large club, and numerous balls and masquerades are given during the season. Provisions and fuel are dear, and good water is much wanted.

That part of Copenhagen, called Christianshaven, is built upon the Isle of Amak, and connected with the city by a bridge. Amak is about four miles long, and two broad; and is chiefly peopled by the descendants of a colony from East Friesland, to whom the island was consigned by Christian II. at the request of his wife Elizabeth, sister of Charles V. for the purpose of supplying her with vegetables, cheese, and butter. From the intermarriages of these colonists with the Danes, the present inhabitants are chiefly descended; but as they wear their own dress, and enjoy peculiar privileges, they appear a distinct race from the natives. The island contains about six villages, and between 3 and 4000 souls. It has two churches, in which the ministers preach occasionally in Dutch and Danish. The inhabitants have their own inferior tribunals; but, in capital offences, are amenable to the king's court of justice at Copenhagen. The old national habit, brought by the original colony when they first migrated to the island, is still in use amongst them. It resembles the habit of the ancient quakers, as represented in the pictures of the Dutch and Flemish painters. The men wear broad-rimmed hats, black jackets, and full, glazed breeches of the same colour, loose at the knees, and tied round the waist. The women are dressed chiefly in black jackets, and red petticoats, with a piece of blue glazed cloth bound on their heads. The island is laid out in gardens and pastures; and still, according to the original design, supplies Copenhagen with milk, butter and vegetables. The house of correction in this quarter of the city is under excellent management, and merits the attention of the philanthropist.

Roeskilde, at the extremity of the Roeskilde fiord, is a town consisting of one long street, and possessing a very ancient cathedral, the burial place of the Danish kings.[12] Helsingüer, at the narrowest part of the

[12] "As soon as we entered this building, we were surprised by the novelty and splendour of the appearance exhibited by the regal coffins. Instead of being concealed

Sound, consists of one single large street, but is protected by the strong fortress of Cronenberg situated upon a narrow neck of land projecting into sea. At this place the tolls of the Sound are collected. The town presents a very lively appearance during the summer, and contains about 30 commercial houses.

Bornholm.] The island of Bornholm is surrounded by rocks highly dangerous to the navigator. The climate is less humid than that of the other islands, and esteemed very healthy.

2d. Fünen.] The bailiwick of Fünen, or Fyen, comprehends, besides the principal island of that name, the islands of Taasinge and Laangeland, and a number of small islands lying along the coast. Funen is 340 miles in circumference; its soil resembles that of Zealand, but the face of the country is still less diversified; the surface—like the waves which have left it—rises and falls in even undulent ridges and vales, with the most regular succession and uniformity. It annually exports barley, oats, rye, and pease, to Norway. The impetuous Cattegat washes the northern coast whose appearance is as uniform as can well be imagined. The superficial extent of this bailiwick is estimated at 1325 square miles, and the population at 137,000. The principal town Odensee, is situated upon the river and canal of the same name, and contains about 6000 inhabitants. This town is said to be of such high antiquity, that its origin has been attributed to Odin. But the fact is, that its most ancient appellation, was Ottensee or Ottonia.

3d. Laaland.] The bailiwick of Laaland, or Lolland, consists of the two islands of Laaland and Falster, having a territorial surface of 652 square miles, with a population of 60,000. This district is so very little elevated, that its coasts are frequently inundated by the sea. On the S. E. there is an extensive sand-bank, and on the S. W. and W. two gulfs, sprinkled with islands. The soil is a fertile mould, upon a strata of lime, highly favourable to agriculture. The exhalations from the marshes render this country peculiarly unhealthy to foreigners, although the natives are little affected by them. The island of Falster rises a little more above the surface of the sea than Laaland, and possesses a more healthy climate.

4th. Aalborg.] The bailiwick of Aalborg forms a part of Jutland, of which it constitutes the most northern point. It consists of a large plain intersected by a ridge of hills, terminating in the promontory of Skagerrack. The whole appearance of this country is sterile and desolate in the highest degree. Its superficial extent is about 2850 square miles, and the population may amount to 144,000. The air is damp and cold, and the climate unpleasant but not unhealthy. The Danish language is chiefly spoken by the peasantry, but German is frequently spoken in the towns. The capital Aalborg contains 6600 inhabitants, and possesses a very good harbour, from which about 500 ships clear out annually.

5th. Wyborg.] The bailiwick of Wyborg lies in the heart of Jutland, and is the only wholly inland Danish province. Its surface has been estimated at 1085 square miles, and the number of inhabitants at 50,000. The soil is rather fertile; but in the midst large tracts of heath occur, and

in tombs, they stand open to view, in chancels or chapels, separated from the spectator only by an iron palisade; and as they are very magnificent, being covered with rich embossments of silver and gold, and the most costly chase-work, the effect is very striking. They seem intended to lie in state, so long as the Danish monarchy shall endure. There are, however, other coffins, which are equally magnificent, within the sepulchres of this cathedral."—*Clarke*, vol. ix.

some hills. The capital of the same name, situated upon the lake of Wyborg, contains 2,400 inhabitants, and is considered the most ancient town in Denmark.

6th. Aarhaus.] The bailiwick of Aarhaus forming the south-eastern point of the Jutland peninsula, is a low level district, chiefly consisting of a light poor soil. The population of this bailiwick is estimated at 100,000 souls, and the superficial extent at 1825 square miles. The town of Aårhaus, on the coast of the Cattegat, contains 6000 inhabitants. Its cathedral is considered the largest in Denmark.

7th. Ribe.] The bailiwick of Ribe contains nearly 4000 square miles; but as the diocese of the bishop differs somewhat from the political division, the data for calculating the probable population is more obscure than in the other bailiwicks. Perhaps 104,000 inhabitants may be near the truth. Its surface is flat, and in the interior presents extensive heaths and woods. The climate is cold and moist, and the atmosphere perpetually loaded with mists. The town of Ribe contains 2000 inhabitants.

CHAP. VIII.—THE DUCHIES OF SLESWICK, HOLSTEIN, AND LAUENBURG.

THE Danish duchies of Sleswick and Holstein have been always distinguished from Denmark by speaking another language, and possessing a distinct constitution, as well as having reached a higher point in civilization. The laws of Denmark are not in force in these duchies, although there is nothing to oppose the exercise of absolute power in Sleswick. After that the duchy of Lauenburg had been given to Denmark, as an indemnification for Norway, Denmark entered with that province and Holstein into the German confederation; but Sleswick remained on the *status quo*. The connexion, however, which has always subsisted between that duchy and Holstein, enables us to treat the three duchies together in this chapter. The population of the three duchies exceeds 700,000.

1st. Sleswick.] The duchy of Sleswick contains a superficial extent of territory amounting to about 3540 square miles. Its features resemble those of Jutland. "That part of the duchy of Sleswick which a traveller must pass in his route from Flensburg to Apenrade is particularly interesting to Englishmen; because," says Dr Clarke, "the very name of their country, the features of its inhabitants, and many of its manners, were hence derived. It is called *Angeln;* but this word is pronounced exactly as we pronounce England or Engelonde. We were surprised at the number of English faces we met; and resemblance is not confined to features. Many articles of dress, and many customs, are common to the two countries. The method of cultivating and dividing the land is the same in both: the meadows bounded by quickset-hedges, or by fences made of intertwisted boughs, reminded us of Kent, Surrey, and Sussex. The natural appearance of the country is also like the south of England; being diversified by numerous hills and valleys, adorned with flourishing woods and fertile fields." Several bays indent the eastern coast; on the west coast there are several sand-banks, in some instances covered with soil, and appearing like islands. The downs are making gradual encroachments on the country, the sand being lifted in great quantities by the N. W. and W. winds, and driven inland so as

frequently to obliterate all traces of culture in large districts. These moving sands extend as far as Hoyer, where the *marsch* soil begins, and vegetation is protected by immense sea-dykes, often rising to the height of 19 or 20 feet. The interior of the country presents a light stony soil, The principal rivers are the Eider, the Nipsae, and the Treene. The inland lakes are very numerous; but none of them of any considerable size. The climate is little different from that of Jutland. The richer species of soil is chiefly devoted to pasture. The inhabitants are a mixture of Danes, Germans, Frises, Angles, and foreign colonists. This province is divided into fourteen bailiwicks, viz. Gottorp, Flensburg, Sonderburg with the islands of Alsen and Arroe, Norburg, Avenrade, Haderslaben, Tondern with the islands of Föhr and Sylt, Bredstadt, Husum and Schwadstadt, Lygum, Hütten, Nordstrandt, Eiderstadt, Stapelholm, and Femern. The capital, a town of the same name with the duchy, and the residence of the governor, is situated upon the Schley. It contains a population of 8000 souls. The town of Flensburg, one of the most important in the Danish dominions, contains a population of 6000 inhabitants, many of whom are engaged in manufactures and commerce. Tönning, which during the blockade of the Elbe became an important place of commerce, possesses a good harbour and roadstead. The island of Femern, in the Baltic, though not exceeding 50 square miles in extent, has one town, one burgh, and fifty villages, with a population of 8000 souls. The soil is very fertile, and a considerable export trade is conducted here. The island of Alsen, is almost three times the size of Femern, with 15,000 inhabitants. It has many agreeable points of scenery, with well-cultivated fields, and large orchards, and is upon the whole one of the finest islands in the Baltic.

2*d. Holstein.*] The duchy of Holstein, when united by Charlemagne in 811 to his empire, and the Eider had become the *Terminus imperii*, was known by the name of *North Albingia* or *Trans Albingia.* Its extent has been estimated at 3400 square miles. Its principal rivers are the Elbe, the Stör, the Alster, and the Eider. It is divided into the sixteen bailiwicks of Ahrensborf, Bordesholm, Cismar, Cronshagen, Kiel, Neumünster, Plön, Reinbeck, Reinfield, Rendsburg, Rethwisch, Segeberg, Steinburg, Traventhal, Tremsbüttel, and Trittau; the lordships of Pinnieberg and Herzhorn; the earldom of Ranzau; and the two districts of Norderditmarschen and Suderditmarschen. The eastern coast of this duchy is high and hilly. It contains many very picturesque districts, and a remarkable chalk-hill near Segeberg. The climate is rude; and the country, on account of its situation between two seas, is subject to violent storms and rapid transitions of weather. Corn is plentiful; but the attention of the inhabitants is chiefly directed to the rearing of horses and cattle. The horses of Holstein are of a dark glossy bay colour, with small heads, large nostrils, and full dark eyes. Notwithstanding their great beauty, and the activity and speed for which they are famous, they possess great strength. About 6000 are annually exported to Prussia, Germany, and France, for the cavalry service and coach-studs. "Many estates support 100 cows which are annually let for their milk, the landlord finding the animal in pasture, and the hirer paying from 8 to 16 dollars, according to the goodness of the animal. With the exception of Switzerland, there is no country in Europe where such a quantity of milk is annually raised. Dr Clarke was reminded of the scenery and inhabitants of his native country while travelling through this duchy, but that which

offered the greatest novelty to his party was the loud and incessant choruses of the myriads of frogs which fill the marshes. We subjoin his amusing account of these reptiles in a note.[13] The inhabitants are chiefly descendants of the ancient Saxons; a part of them derive their origin from the Wendes, an ancient tribe, early assimilated in language and customs to the Germans. The nobility of Holstein are numerous and wealthy. This province is united with Sleswick under one governor. Gluckstadt, the capital, is situated upon the Elbe, and contains a population of about 6000 souls. Kiel, the seat of a university, has 7,500 souls. Plön, the ancient residence of the Dukes of Holstein-Plön, is situated in a district of great beauty.

Altona.] Altona, sometimes called Altena, in the Lordship of Pinneberg, is the second city in the Danish dominions with regard to population. It is situated upon the Elbe, at a very short distance from Hamburg, and was built in that situation that it might attract a share of the trade of that commercial city. It became subject to the Danes in 1640; and, in 1664, was erected into a city. About the beginning of the 18th century, it was almost entirely laid in ashes by the Swedes, but it has recovered all its former consequence, and now contains a motley population of 30,000 souls, with several wealthy commercial houses.

3*d. Lauenburg.*] The duchy of Lauenburg was in ancient times inhabited by the Polabers, a Wendish tribe, who were subjugated by Duke Henry the Lion. After having successively come under the dominion of different Saxon lines, in 1689 it fell to the House of Brunswick; and the Wolfenbuttle line of this house resigned its pretensions to the district, in 1706, in favour of the Brunswick-Luneburg or Hanoverian line, with whom it remained till 1815, when it was, with the exception of a small district, given to Prussia, who yielded it again to Denmark. Its territorial surface is about 600 square miles, presenting a low flat, fertile plain, bounded by the Elbe and intersected by the Stecknitz and Bille. There is a considerable intercourse between Lubec and Lauenburg; but the population is wholly occupied in agriculture. The inhabitants are Germans, speaking the Low German dialect. This duchy is divided into four bailiwicks, viz. Ratzeburg, Lauenburg, Schwarzenbeck, and Steinhorst, and has its peculiar government guaranteed to it by the king of Denmark. Ratzeburg, the principal town, situated upon an island in the lake of the same name, contains a population of 2,100 inhabitants.

Authorities.] The following works illustrate the geography and history of Denmark: Messenii Scandia Illustrata, Stockholmiæ, 1700.—Deliciæ Daniæ, Norvegiæ, &c. Lugd. Bat. 1706.—Roger, Lettres sur le Danmarc, 1764—1768.—Dr Andrew's Revolution of Denmark, 1774.—Coxe's Travels, Lond. 1784.—Baron Riesbeck's Travels, Lond. 1787.

[13] "To call it croaking, would convey a very erroneous idea of it, because it is really harmonious; and we gave to these reptiles the name of *Holstein nightingales*. Those who have not heard it, would hardly believe it to be possible for any number of frogs to produce such a powerful and predominating clamour. The effect of it, however, is certainly not unpleasing; especially after sunset, when all the rest of animated nature is silent, and seems to be at rest. The noise of any one of them singly, as we sometimes heard it near the road, was, as usual, disagreeable, and might be compared to the loudest quacking of a duck; but when, as it generally happened, tens of thousands, nay, millions, sang together, it was a choral vibration, varied only by cadences of sound, something like those produced upon musical glasses; and it accorded with the uniformity which twilight cast over the woods and waters."

—Swinton's Voyage performed in the years 1788—1791.—Voyage au Nord de l'Europe, Paris, 1796.—Catteau's Tableau des états Danois, Paris, 1802.—Wraxall's Tour.—Mallet's Northern Antiquities, Edin. 1809.—Macdonald's Travels, published in 1810.—Birsgelin's Travels, published in 1810.—Wolff's Northern Tour, Lond. 1814.—Geographie over Konegeriget Danemark forfattet af S. B. Juul og Kron. Copenhagen, 1816.—Clarke's Travels, Part 3d. Scandinavia, Lond. 1824.—Schlegel's Denmarks og Hertugdommen's Statsret (on the Constitution of Denmark, &c.)—Feldborg's Denmark Delineated.

CHAP. IX.—THE FEROE ISLANDS.

Number and Extent.] The Feroe Islands lie to the N. W. of Denmark, between Iceland and the Shetland Isles. They are twenty-five in number, seventeen of which are inhabited, the rest being mere cliffs and holms. Their total superficial extent has been estimated at 500, and by others at 860 square miles, and the inhabitants at 5,300, although they could support a much larger population. It is probable they derived their name from the wild sheep, called *farr*, which were found upon them by the first settlers.

History.] This group was discovered and colonized by fugitive Normans, between the years 858 and 868. They do not appear to have attracted much notice from Britain at any period. During the American war they became notorious for smuggling, and continued to be so till the annihilation of the Dutch and Danish East India trade, during the French revolutionary war. The language is a Danish dialect of the Norse. The islanders are a laborious and simple race of men, leading a very primitive life, although by no means destitute of the necessaries of life. Their ordinary food is barley, milk, flesh, fish, and bread. Beer is considered a luxury, and spirits are only used on solemn occasions.

Physical Features.] The whole of these islands are composed of basaltic rocks; and some of the mountains, as Skalings-field in the Island of Stromoe, and Slatturtind in Osteroe, rise to the height of 3000 feet above the level of the sea. In the latter island there occurs a range of basaltic pillars, almost as regularly defined as those of Staffa. The principal minerals are copper, jasper, and coals. The latter might be worked to great advantage in Suderoe. A few lakes exist in some of the islands, and abundance of torrents and rivulets; but no opening between the mountains which can be called a valley, or stream that can be dignified with the name of a river. On the coasts of these islands the masses of rock in many places, viewed at a distance, suggest the idea of extensive walls, towers, castles, and spires, expanding with an effect often strikingly picturesque and sometimes awfully sublime. The shores are in many places so steep, that the inhabitants can only reach the beach by the help of cords. The best havens are those of Westmann-haven on the west coast of the Island of Stromoe, and Kingshaven on the Island of Osteroe. But the tides in the straits between the different islands are extremely rapid, and frequently form dangerous *maelstreams* or whirlpools, while frequent squalls increase the danger of the navigator.

Soil, Climate, and Productions.] The climate is rigorous, but not so much so as might have been expected in such a latitude. The winter is as mild as in Denmark. The soil is thin, mossy, and wet, offering little

encouragement to the agriculturist; but occasionally affording good pasture. A little barley, however, is raised; and potatoes, with a species of yellow turnip, thrive well. The land is prepared for the seed by the spade—the thin soil not admitting the employment of the plough—and the inhabitants are often so industrious as to cover the flat surfaces of stones with soil, upon which they grow potatoes and turnips. Trees are unknown, and the only fruit is that of a few different kinds of wild berries. Hay produced from natural grass is their principal crop: what grain they require being mostly imported from Denmark. The high northern situation of these islands renders the days in summer very long, and in winter very short. The longest day of summer is 20 hours, and the shortest day of winter is 4 hours. But the clear twilight and frequent aurora borealis, render the latter less tedious to these islanders. Cows of a small breed, and sheep, amounting to better than 35,000, form the principal wealth of the inhabitants. The latter are of a very peculiar breed, and remain constantly exposed to the weather. The horses, which are very diminutive in stature, are only used for bearing burdens; wheel-carriages being totally unknown, and from the nature of the country, would be useless though they were known. A good dog is valued as high as a cow.

Industry.] The population of the Feroe islands is supported chiefly by bird-catching and fishing. Bird-catching—here a most arduous and hazardous employment—is prosecuted with great alacrity by these islanders, who ascend the most frightful cliffs with a long pole, having a bag-net fastened to the end, through the meshes of which the birds thrust their heads and hang suspended by the neck. Upwards of 10,000 sea-fowl are annually caught in this manner. The principal fishery is cod, though that species of fish is said to have become less abundant than formerly. Herrings are also taken occasionally, and whales sometimes appear upon the coasts. The seal-fishery in the month of September is often very productive. Manufactures and trade, as may well be supposed, do not occupy much of the attention of these simple islanders. Every man, for the most part, practises the whole of the handicraft arts, and is his own weaver, tailor, tanner, shoemaker, mason, carpenter, boat-builder, fisher, bird-catcher, and farmer. They contrive, however, to manufacture a few jackets, and upwards of 112,000 pairs of stockings annually, which, along with their surplus raw produce, as train oil, feathers, skins, and sometimes fish, tallow, and butter, they exchange with the Danes for grain and pulse, fishing materials, timber, tar, nails, lead, tobacco, tin, coffee, salt, sugar, and other luxuries.

Government.] With regard to government, these islands are under nearly the same regulations as the other Danish colonies, especially Iceland. A military officer or bailiff, with the command of thirty men is first in authority, and under him are the treasurer and the governors of the *syssals* or districts, which are six in number, viz. Stromoe, Norderoe, Osteroe, Waagde, Sandoe, and Suderoe. The expenses of the establishment are supplied by taxes imposed on the produce of the country, particularly on tallow, wool, and sheepskins. The religion is, Lutheran; and the direction of ecclesiastical affairs is vested in a provost, who acts under the bishop of Zealand. The islands are divided into seven parishes, and in these seven parishes there are 39 places of worship, so that almost every village has a church.

Thorshaven.] There are a great many villages and hamlets scattered

over these islands, but there is nothing resembling a town, Thorshaven excepted, which stands on a small tongue of land on the south-east side of the island of Stromoe, is the seat of government, and contains a population of about 500 souls. The houses are constructed of wood, closely crowded together, and roofed with birch-bark from Norway, over which is laid a layer of turf, which, from the dampness of the climate, retains at all times the same verdant appearance as the adjacent fields. The interior of the houses is neat, clean, and convenient.

CHAP. X.—ICELAND.

ICELAND is situated on the verge of the Arctic Ocean. It is distant from the colonized part of Greenland 166 miles, but from the nearest point of land only 95. From the Faroe Isles it is distant 220 miles, and from Drontheim in Norway, 330. Its length from east to west is 280 miles; its mean breadth from north to south, 210. Its superficial extent is not exactly ascertained, but has been calculated at 30,500 square miles, with a population of 50,000 souls.[14] Its form would be compact, approaching nearly to a circle, but for a long projection in its north-west angle.

Early History.] Iceland was discovered about A. D. 860, by a Norwegian pirate, named Nadodr, who was accidentally driven upon the coast while on a voyage to the Feroe Islands, and who gave to it the name of *Snioland*.[15] A few years after, Gardar, a Swede, succeeded in circumnavigating the island, and gave it the name of *Gardarsholm*.[16] The present name was given to it by Flocke, a famous pirate of those times, who explored most of the southern and western coasts of this island. The country was colonized in the year 870, by two Norwegian noblemen, Ingulf and Hiörleif. It is asserted in some of the Icelandic sagas, that there were actual settlements in the island before this period, and that as early as the fifth century, Iceland had been colonized from Scotland and Ireland; but this seems improbable. In the *Landnama Bok*—which is among the earliest of the Icelandic historical records—it is stated, however, that among other things, writings in the Irish language were found. The Norwegian colony settled on the south-western part of the island, on the spot where Reykiavik now stands. In the course of half-a-century, the coasts of this remote country were well-peopled; and in the *Landnama Bok*, which contains minute details of the spreading of the colonies, we find several names of Scotch and Irish families who came over and settled about this period. Frederick, a bishop from Saxony, began to preach the Christian doctrines in Iceland in the year 981; and Islief, the first bishop of Skalholt, was consecrated in 1057. In the year 1261, the whole of Iceland, with the exception of the eastern province, submitted to Haco VI. king of Norway. A few years afterwards the total subjection of the Icelanders was completed, but under conditions which still maintained their rights and their commerce. In 1280, Magnus, the successor of Haco, gave to the island the code of laws well-known by the title of *Ionsbok*, which was no more than a revised copy of the ancient laws. The last political change which occurs

[14] In the year 1703, the population of Iceland amounted to 50,444; in 1770, to 46,201; in 1783, to 47,287; in 1801, to 47,207, viz. 21,476 males and 25,731 females; and in 1823, to 49,269.

[15] 'Snowland.'

[16] 'Gardar's island.'

in the history of Iceland, was its transference from Norway to the Crown of Denmark, in the year 1381. In the year 1482, a pestilence carried off nearly two thirds of the population: and another broke out towards the close of that century. In addition to these calamities, the Icelanders were at this period exposed to the incursions of pirates, who plundered their property, committing frequent murders, and carrying off the inhabitants. From the 11th to the middle of the 14th century, the sciences were successfully and ardently cultivated in this obscure corner of Europe; and learned Icelanders were found in the service of foreign courts. The poetry of the Troubadours was introduced into Iceland in the 12th century; but towards the 14th century the arts and sciences fell into decay, with the further loss of national independence under the Danish dominion. The decline of literature, and of the national character of the Icelanders, however, may be traced to more remote causes. Europe had now begun to emerge from darkness and barbarity, and the continental nations were gradually advancing in learning; the poets and historians of Iceland were therefore received with less distinction, while the errors and tyranny of the church of Rome, broke in upon the pure and peaceful worship of Iceland, so early as the 12th century. The reformation of religion, and the introduction of printing, about the year 1530, seemed to be the dawn of renewed life to Iceland; and in 1537, the Protestant doctrines were universally embraced. The schools were now re-established; but so great had been the depression of learning, that it was found difficult at first, to procure men of sufficient knowledge to superintend them.

Modern History.] The annals of Iceland during the 17th century, are destitute of any important events. In the early part of this period, piratical incursions of the French, British, and even Algerines, were not unfrequent. Of the latter, a large body landed on various parts of the southern coast and on the Westmann Islands, and carried 400 of the inhabitants into captivity. This century also disgraces Iceland, by the superstitious enormities which were practised. A belief in necromancy was so prevalent, and held in such horror, that, within the period of 60 years, 20 persons perished in the flames! The commencement of the 18th century was marked by the destruction of 16,000 persons by the small-pox. From 1753 to 1759, the seasons were so inclement, that famine carried off 10,000 people, besides vast numbers of cattle. In 1783, the most terrible volcanic eruption on record, broke out from the neighbourhood of the mountain Skaptaa, which for more than a year showered ashes on the island. Cattle, sheep, and horses were destroyed, and a famine ensued. The small-pox again appeared; and in a few years 11,000 people perished. On the breaking out of the war between Great Britain and Denmark, in the year 1807, the Icelanders were greatly apprehensive of absolute starvation, from the want of those necessary supplies which they were accustomed to receive from the mother-country. On considering the case, however, licenses were humanely granted by the British government, to Danish vessels, to proceed to Iceland, under the condition of their touching at the port of Leith, both when outward-bound and on their passage home. By this arrangement, the inhabitants were regularly supplied; and though the act of piracy, committed by a Captain Gilpin, in 1808, who robbed the treasury of at least 30,000 rix-dollars, as well as the usurpation of Iörgensen, the following year, necessarily tended to excite fresh alarms in their minds,

yet they were soon relieved by an order, issued by the British cabinet, prohibiting all acts of hostility against Iceland and the rest of the Danish colonies in the Arctic Seas, and taking the inhabitants and their property under the special protection of Great Britain. Since 1815, a new regulation, issued by the court of Denmark, allows British ships to proceed to Iceland, on condition of their procuring a special license from Copenhagen.

Physical Features.] A country less inviting to the enterprise of adventurers than Iceland, can scarcely be imagined. Surrounded by stormy seas, the mountains covered with eternal snow, the barren plains devastated by volcanic fire, this island seems not to have been framed by nature for the habitation of man. The country in general is mountainous: but in some districts, particularly those extending from the S. W. to the N. W. coasts, nearly through the centre of the island, there are extensive plains, covered with herbage only near the sea, or where morasses have been formed. The highest mountains, some of them reaching an elevation of 6000 feet, are on the east and west sides of the island. They are in groups; and those called *Jokuls*, which are covered with perpetual snow, are chiefly, if not all, volcanic. Between the ridges of the mountains in the vicinity of the coasts are rich and beautiful valleys, in which the inhabitants have erected their dwellings; and many of the lower mountains are covered with coarse grass, which affords summer pasturage to the cattle. About two-sevenths of the whole island are capable of culture, but the population is extended only over a tract along the coast, of about 300 square miles. The whole of the interior, as far as has yet been explored, consists of a vast inhospitable desert, traversed in various directions by barren mountains, between which are immense tracts of lava and volcanic sand, with here and there a small spot scantily covered with vegetation.

Bays, Lakes, and Rivers.] The coast, except towards the south, is much indented by arms of the sea; but, with the exception of Havensfiord on the S. W., there is scarcely a safe winter-harbour. The Isafiorden on the N. W. the Hana-fiorden on the N., the Vapnafiorden on the E., and the Bridafiorden on the W., are the principal bays. There is a considerable number of lakes in different parts of the island, some of which are of great extent. The principal are those called Thingvallae Vatn, My Vatn, and Fiske Vatn. The first of these is about 10 miles long, and from 3 to 4 broad. The My Vatn is never known to freeze. The Dinpalon, on the peninsula of Snäfiälnäs, has high and low tides. There are many large rivers formed by the melting of the snow on the Jokuls; and they have all a turbid appearance; some of them being so white as to resemble milk diluted with water, have received the name of *Huit-aae*, or 'the White River.' Several emit a fœtid smell, particularly when they issue from the snow. Besides these large rivers, there are many smaller, the water of which is transparent. Along almost all the southern coast, eastward from Eyarbark, where the great river Elvas empties itself into the sea, there are extensive shoals, formed, no doubt, by the deposition of the rivers proceeding from the great range of Jokuls to the eastward of Mount Hecla.

Volcanoes.] Iceland, most probably owes its origin to subterranean fire, the terrible effects of which are, at almost every step, still visible. Mountains of grit and ashes, immense tracts of lava, and beds of brimstone, are the melancholy records of numberless volcanic eruptions;

while tepid marshes, fountains of boiling water, with smoke and flame rising continually through the rifts of the ice-enveloped mountains, give fearful proofs that the mighty agent imprisoned below has abated but little of its activity.

Hecla.] Mount Hecla is famous among volcanic mountains, and, though not the highest, is pre-eminent among the mountains of Iceland, as having been a burning mountain at least since the year 1106, since which, more than twenty eruptions, one of them so late as 1818, have been recorded. For leagues round it nothing is to be seen but stones and lava, without the least particle of vegetation; and the very rocks of the mountain itself are fractured in every direction. But the destructive agency of volcanic fire has by no means been confined to Hecla—almost every mountain in the island either is, or has been a volcano; and it is remarked by the inhabitants, that as the snow and ice seem to close over one crater, the devouring element forces for itself a passage at another. These eruptions here, as elsewhere, are always preceded and accompanied by tremendous noises issuing from the bowels of the earth, earthquakes, and sometimes by violent tempests. The destructive agency of the volcanoes in the interior is less felt, as the central districts of the island are totally uninhabited.

Geysers.] The greatest curiosities which Iceland presents are the springs of hot water, especially the magnificent and tremendous explosions of the Geysers. These extraordinary fountains are situate about 16 miles north of Skalholt, on the east side of a small ridge, separated from some high mountains by a narrow swamp. Besides the principal fountains, there are a great number of boiling springs, cavities full of hot water, and several from which steam issues. There are also some places full of boiling mud, gray and red. The silicious depositions of the water of the great Geyser, have formed for it a basin 56 feet in diameter in one direction, and 46 in the other. In the centre of this basin is a cylindrical pipe or pit, ten feet in diameter. Through this pit, the hot water rises gradually, filling it and the basin, after which it runs over in small quantities. At intervals of some hours, when the basin is full, explosions are heard from below, like the firing of cannon at a distance; and at the same time, a tremulous motion of the ground is felt around the basin. Immediately the water rises in a mass from the pit, and sinking again, causes the water in the basin to be agitated and to overflow. Another and stronger propulsion follows, and clouds of vapour ascend; at length strong explosions take place, and large quantities of steam escaping, the water is thrown to a great height, generally from 30 to 90 feet. The steam coming in contact with the air is condensed into vapour, thick clouds of which are tossed and rolled one over another with great rapidity, the whole forming a very singular and magnificent exhibition. After continuing for some time, the explosions cease, when the basin and pipe are found empty. Bursts of steam sometimes take place when the water is rising, without any warning by subterraneous noise. These phenomena are evidently caused by the production and confinement of steam in cavities so formed that when the accumulation arrives at a certain point, the pressure of the water opposing its escape is overcome, and the water is thrown out before it. The New Geyser—as it was called by Sir John Stanley—is about 130 paces from the great one. It is an irregular shaped pit, nine feet in its greatest diameter. About 20 feet below the orifice—which is not surrounded by an accumulation of silicious

matter as the other—the water is seen in great agitation. At irregular intervals, the water is tossed out of the pit to a great height, followed by a prodigious rush of steam, accompanied with a roaring noise. The force is so great, that even when there is a good deal of wind, the vapour forms a perpendicular column, nearly 70 or 80 feet high; and when large stones are thrown into the pit, they are shivered to pieces, and thrown out to a height often far beyond that of the jet of vapour and water.[17]

Hot Springs.] The most curious of the springs in Iceland is the *Tunguhver* in the valley of Reckholt. Among a great number of boiling springs, are two cavities within a yard of each other, from which the water spouts alternately. While from one the water is thrown about ten feet high in a narrow jet, the other cavity is full of water boiling violently. This jet continues about four minutes, and then subsides, when the water from the other immediately rises in a thicker column to the height of three or four feet. This continues about three minutes, when it sinks and the other rises, and so on alternately. It is difficult to imagine the structure of the cavities which occasion this irregular alteration, nor would it be easy to construct a piece of mechanism, of which steam is the prime mover, to imitate the phenomena. In the middle of the river, which runs through the valley of Reckholt, is a small rock, from the top of which hot springs issue. At Reckholt is a bath, which was constructed 600 years ago, by the famous Snorro Sturleson. It is 14 feet in diameter, and 6 feet deep, being supplied with hot water from a spring about a hundred yards distant, by means of a covered conduit which has been much damaged by an earthquake. There was also a spring of cold water brought to it, so that any desired temperature might be obtained.

Climate.] Though this island occupies a more southerly latitude, and presents, on the whole, a much greater extent of vegetation than the adjacent continent, it has nevertheless been unfortunately doomed to bear the repulsive name of *Iceland,* while the other has been favoured with the pleasing and animating appellation of *Greenland.* The imposition of these names was wholly arbitrary, according to the accidental circumstances of the individuals with whom they originated. Flocke, the third adventurer to Iceland, happening to ascend one of the mountains in the western peninsula, discovered a bay completely filled with Greenland ice, and therefore thought himself entitled to change the name given to the island by his predecessors, to that which it has ever since retained. The consequence has been, that the generality of those who inhabit more genial climes, have viewed it as equally inhospitable with the most rigid of the polar regions,—considering the natives as exposed to all the benumbing influence of relentless frosts, and perpetually immersed in ice or snow. This, however, is far from being the case. The climate is perhaps more unsettled, but it is very seldom that the cold is more intense than in the south of Scandinavia.[18] In the course of the last

[17] At the time when Mr Hooker saw it, there was a greater quantity of water than when either Sir John Stanley or Sir George Mackenzie witnessed its eruptions. Indeed, what Mr Hooker has described as a column of water, Sir George Mackenzie describes as one of vapour. When we consider the immense power of the agent which sets these grand works in play, it is by no means difficult to suppose frequent alterations in their movement and appearance. The destruction of a natural valve, or a slight change in the configuration of the subterraneous pipes and cavities, might occasion variations in the phenomena from time to time.

[18] "At first," says Dr Henderson, "I confess I shuddered at the idea of spending

century, the winters of 1717, 1742, 1784, and 1792, were excessively cold; and the sea itself was frozen to such an extent, that a communication was kept up for some time on the ice between the coasts on some of the principal bays, as also between the different islands in the Bidafiorden. The keenest frost ever experienced in Iceland, was in the year 1348, when the ocean was congealed all round the island so as to admit of the inhabitants riding on horseback from one promontory to another on the ice. The longest day of summer, and the longest night of winter, last each of them a week in the extreme north. Storms and hurricanes occur as frequently here as in the Feroe Islands.

Aurora Borealis.] We cannot omit to notice the most striking aërial phenomenon exhibited by an Icelandic winter, viz. the auroræ boreales, or northern lights, which are here seen in all their brilliancy and grandeur. I had an opportunity, says Dr Henderson, of contemplating them almost every clear night the whole winter, sometimes shooting across the hemisphere in a straight line, and presenting to the view, for a whole evening, one vast steady stream of light; but more commonly they kept dancing and running about with amazing velocity, and a tremulous motion, exhibiting, as they advanced, some of the most beautiful curvated appearances. On gaining one point of the hemisphere, they generally collected as if to muster their forces, and then began again to branch out into numerous ranks, which struck off to the greatest distances from each other, as they passed the zenith, yet so as always to preserve the whole of the phenomena in an oval-shape when they contracted nearly in the same way as they expanded; and after uniting in a common point, they either returned in the course of a few minutes, or were lost in a stream of light, which grew fainter and fainter, the nearer it approached the opposite side of the heavens. They are mostly of a dunnish yellow, yet often assuming mixtures of red and green. When they are particularly quick and vivid, a crackling noise is heard, resembling that which accompanies the escape of the sparks from an electrical machine.

a winter in Iceland; but what was my surprise, when I found the temperature of the atmosphere not only greater than that of the preceding winter in Denmark, but equal to that of the mildest I have lived either in Denmark or Sweden. In the month of November, the mercury in Fahrenheit's thermometer did not sink lower than 20°, and it was nearly as often above the freezing point as below it. On the 6th of December, with clear weather and a light breeze from the east-north-east, it sunk to 8° 30″; after which, especially towards the end of the year, the weather became remarkably mild, and continued in this state till nearly the middle of January, the thermometer for the most part between 34° and 40°. On the 10th and 11th of January it fell as low as 15° 30″, but rose again in a short time, and continued much more frequently above than below the point of congelation, till the 7th of March, when we had a strong wind from the NNW., and the mercury which had stood the preceding day between 30° and 34°, sunk in the evening to 9° 30′, at noon to 8°, and at nine o'clock in the evening, it fell as low as 4° 30′, which was the strongest degree of frost we had the whole winter. The following evening it was at 6°; on the 9th it rose to 10°; on the 10th to 19°; and so on till the 13th, when it got again to 32°, and continued for the most part above it for the whole of the month. On the 12th of April it fell to 19°, but otherwise kept varying between 32° and 52°. About the middle of May the atmosphere grew colder, occasioned, most probably, by the approach of some masses of Greenland ice, and on the 18th and several of the following days, the mercury was at 29°. The quantity of snow that fell during the winter was very considerable, especially in the northern parts of the island, where many of the peasants were reduced to circumstances of great distress, by the total consumption of the fodder they had provided for their cattle. The atmosphere was on the whole rather clear and serene than darkened by mists, which is in a great measure to be ascribed to the prevalence of brisk land winds, to which the mountainous nature of the country is extremely favourable. It must at the same time be allowed, that the winter of 1814 (that which Dr Henderson passed in Iceland,) as well as that which immediately preceded it, was considered by the Icelanders as uncommonly mild."

Animals.] Iceland presents nothing remarkable to the zoologist. Of indigenous quadrupeds the number is very small, and must be limited to the fox, of which there are two varieties. The rein-deer, the rat, and the mouse, have all been imported; as well as the domestic animals, the dog, the cat, the goat, the sheep, the ox, and the horse. Polar bears are occasional visitors, coming from the ice which takes ground on the north and east coasts during winter. The skins of the foxes, particularly those of the *canis fuligenis*, or blue fox, is a valuable article of commerce. The rein-deer are wild, and are derived from an original stock of three, which were all that survived of some that were sent from Norway in 1770. Instead of being serviceable, they often destroy the grass which is preserved for hay. Several species of seals frequent the shores in considerable numbers; but they are not much sought after. Whales are seldom seen on the coasts of Iceland; but that variety of the *delphinus*, named in Orkney the *ca'ing whale*, appear frequently in large shoals. The cinerous eagle, or crane, is very common. The Iceland falcon, formerly so much prized, is now seldom seen, though it has not for many years been molested. Ravens are found in great numbers near every habitation on the coast, watching for the offal of fish: they breed in the cliffs at a considerable distance from the shores. The snow-flake, wheat-ear, white wagtail, golden plover, snipe, and whimbril, together with the ptarmigan, are the other principal land-birds of Iceland. Every kind of water-fowl common to northern latitudes is found on the coasts of Iceland and on the lakes. Swans frequent the lakes and swamps in great numbers. But of all the varieties which breed in the country, the eider duck is, from its habits and usefulness, the most remarkable and valuable.[19]

Plants.] Mr Hooker has furnished us with an extensive botanical catalogue, to which we refer such of our readers as desire particular information regarding the vegetable productions of this remote island. The birch is the only tree which withstands the rigour of an arctic winter; but its growth is limited, in the most favourable situations, to five or six feet. There is a garden at Husavik, well laid out, and in excellent order. Besides potatoes, cabbages, and greens, which grow in great abundance, it contains pretty large beds of parsnips, turnips, carrots, beans, pease, parsley, sallad, and onions.

Minerals.] Among the various mineral productions of this country, are zeolite and obsidian, malachites, basaltes, crystals, agates, *surturbrand*, a kind of petrified wood which supplies the place of coal, vitriol, and iron. At Krysuvick in the south, and at Namafell in the north of Iceland, are

[19] Early in June, these birds collect in great numbers at every place adapted for making their nests, and where their food is in plenty. The nests are formed on the ground (generally in the hollows among the grass), of straws mixed with the down which they pluck from their breasts. There is always a quantity of down round the nest, sufficient for covering the eggs when the ducks go to feed, which they do regularly during the time of low water, when they can get at the shell-fish among the sea weeds. At this time these birds lose all their wildness, and suffer man to approach, and even to touch, and to lift them from their nests. The drakes are not so fearless; but they frequently remain near the nests, and express their displeasure when any one touches them. As soon as the young ones have left the shells and got to the water, the eider ducks become as wild as any other bird; and in a month or six weeks, almost all of them disappear, and it is not known to what place they resort. The nests are robbed of a certain number of eggs, and of the down. The former are a great luxury to the natives, and the latter is a valuable article of export. It is part of the employment of the women during winter, to pick the straws and refuse from the down.

great chemical laboratories. In both places, we almost see Nature in the act of forming sulphur, alum, silica, lime, oxide of iron, iron-pyrites, gypsum, basalt, lava, and porphyry.

Inhabitants.] With respect to the personal appearance of the Icelanders, they are rather tall, of a frank open countenance, a florid complexion, and yellow flaxen hair. The women are shorter in proportion, and more inclined to corpulency than the men; but many of them would look handsome in a modern European dress. In some districts the men suffer the beard to grow, and differ in their dress from the other inhabitants of the country. In youth both sexes are generally of a very weakly habit of body, which is the necessary consequence of their want of proper exercise, and the poorness of their living; yet it is surprising what great hardships they are capable of enduring in after life. Owing to their want of personal cleanliness, they are generally exposed to cutaneous diseases. They are also frequently attacked with obstinate coughs and pulmonary complaints, by which, perhaps, more are carried off annually, than by any other disease. Almost the twenty-fifth part of the deaths are occasioned by accidents, particularly by drowning. An extraordinary number of children die before their tenth year. The predominant character of the Icelander is that of unsuspecting frankness, pious contentment, and a steady liveliness of temperament, combined with a strength of intellect and acuteness of mind seldom to be met with in other parts of the world. They have also been noted for the almost unconquerable attachment which they feel to their native island. With all their privations, and exposed as they are to numerous dangers from the operations of physical causes, they live under the practical influence of one of their common proverbs: 'Iceland is the best land on which the sun shines;' and their most popular entertainment consists in reciting poetical legends, relating to the history of their country, and the deeds of their ancestors.

Manners and Customs.] In the persons, habits, and customs of the present inhabitants of Iceland, we are furnished with a faithful picture of those exhibited by their Scandinavian ancestors. They adhere most rigidly to whatever has once been adopted as a national custom, and the few innovations that have been introduced by foreigners, are scarcely visible beyond the immediate vicinity of their factories.

A winter-evening, in an Icelandic family, presents a scene in the highest degree interesting and pleasing. Between three and four o'clock the lamp is hung up in the *badstofa*, or principal apartment—which answers the double purpose of a bed-chamber and sitting-room—and all the members of the family take their station, with their work in their hands, on their respective beds, all of which face each other. The master and mistress, together with the children or other relations, occupy the beds at the inner end of the room; the rest are filled by the servants. The work is no sooner begun, than one of the family, selected on purpose, advances to a seat near the lamp, and commences the evening-lecture, which generally consists of some old saga, or such other histories as are to be obtained on the island. Being but badly supplied with printed books, the Icelanders are under the necessity of copying such as they can get the loan of, which sufficiently accounts for the fact, that most of them write a hand equal in beauty to that of the ablest writing masters in other parts of Europe. Some specimens of their Gothic writing are scarcely inferior to copperplate. The Icelanders have no national dance;

their singing is very monotonous, and their heroic poems are recited in a screaming voice. They have no clocks, but use hour-glasses; and calculate time with great accuracy by the sun and stars when visible, or by the tides. They never count time, as one, two, three, &c., but have particular names in their own language for every hour and half-hour.

Industry.] There are in fact only two seasons in Iceland, summer and winter; the former of which, short and precarious as it is, the natives must employ with assiduity, in order to make provision for the latter. When the snow leaves the ground, the females spread the manure which had lain on the *tun* in heaps all winter, and collect any stones that may have gathered on it. Such of the men as are not employed in the fishery cut turf, both for fuel and a covering to their houses, and make charcoal for the use of the smithy. When the young cattle have been turned out on the mountains, the care of the cows and sheep is left to the female part of the family, who milk them twice a day, make butter, cheese, &c., and repair in companies about the middle of summer, to collect the *Lichen Icelandicus*,[20] in the uninhabited parts of the country. They are generally accompanied by some of the men; and the few weeks they spend in this employment, are regarded as the happiest of the whole year. They live in tents, which they remove from place to place, according to the greater or less abundance of the moss. At this time the men are either out at the fresh water fishing, or proceeding in cavalcades to the factories, where they barter their home-productions against articles of necessary use for the winter. The most important branch of rural labour in Iceland, is the haymaking. About the middle of July the peasant begins to cut down the grass of the *tun*, which is immediately gathered to a convenient place to dry, and after having been turned once or twice, is conveyed home on horseback to the yard, where it is made up into stacks. Hay harvest being over, the sheep and cattle that had been out all summer on the mountains are collected; the houses are put in a state of repair for the winter; the wood needed for domestic purposes is brought home to each farm; the turf is also taken in; and the labours of the season conclude with the removal of the manure to the different parts of the farm. During the winter the care of the cattle and sheep devolves entirely on the men. The domestic employments of this season are multiplied and various. The men are occupied in fabricating necessary implements of iron, copper, wood, &c.; and some of them are wonderfully expert as silversmiths,—their work, at times, in this branch being only distinguishable from that done in Copenhagen by the absence of the stamp. They also prepare hides for shoes; make ropes of hair or wool; and full or scour the woollen stuffs. In some parts of the country, the men also spin and knit like the women, and some of them weave. Besides preparing the food, the females employ their time in spinning, which is most commonly done with the spindle and distaff; knitting stockings, mittens, shirts, &c.; as also embroidering bed-covers, saddle-cloths, and cushions, which they execute with much taste, interspersing flowers and figures of various colours.

Fisheries.] It is from the sea, however, that the Icelanders derive

[20] The Icelanders dry this plant by artificial heat, or in the sun, and then beat it in a bag into a fine powder, in which form it presents an agreeable nutritive. Von Troil, in his excellent Letters on Iceland, enumerates three other plants, which, prepared in a similar manner, afford a substitute to the patient Icelander for the gramineous fruits of happier climes: viz. The *Polygonum bistorta*, *Arundo arenaria*, and *Arundo foliorum lateribus convolutis*.

their chief subsistence and profit. The cod is very plentiful on the coast; and formerly the fishery of Iceland was prosecuted by the British and French with great success. From the 3d of February to the 12th of May, is what the Icelanders call *ver-tima* or fishing-season; at which period vast numbers of the inhabitants flock to the southern and western shores, from the districts in the north and east, where the fishing is generally impracticable at this time, owing to the bays and creeks being filled with polar ice. They provide themselves with a complete skin dress, consisting of the *brok*, in the shape of small clothes and stockings all in one piece; the *stack*, or large jacket, which falls down, and is tied close over the brok, so as to prevent the water from getting in between them; and tight-fitting shoes of the same materials, below which are coarse warm woollen stockings for greater warmth. The principal fish they catch is the cod, which is laid out on the cliffs, or a large surface of flat stones on the beach, and dried in the sun, and afterwards stacked upon the beach. Sometimes the fish are hung up and dried in houses, called *hiallar*, which are so constructed, that the wind has a free passage through them, while they are sufficiently covered to keep out the rain. The ling, skate, hollibut, flounders, and the cat-fish, are common, and are likewise dried for winter use. Herrings are taken on the north coast; but though vast shoals of them frequent the bays, this branch of the fishery is not much attended to.

Education.] The three last centuries have produced many learned men; and at the present day, Iceland can boast of sons who have risen to great eminence in the different departments of literature. Such as study at the university of Copenhagen are generally distinguished above their fellow-students by their quickness of apprehension, their unwearied application, and their insatiable thirst for knowledge. On inquiry into the state of mental cultivation in Iceland, it is not so much the literary fame of a few select individuals, who have enjoyed superior advantages, which strikes our attention, as the universal diffusion of the general principles of knowledge among its inhabitants. Though there be only *one* school in Iceland, and that solitary school exclusively designed for the education of such as are afterwards to fill offices in Church or State; yet it is exceedingly rare to meet with a boy or girl, who has attained the age of nine or ten years, that cannot read and write with ease. It is even said that a priest may refuse to perform the marriage ceremony if any of the parties cannot read. We meet with many persons who both write and speak Latin. The better educated individuals speak Danish, which is not very different from the Icelandic, as the latter is properly the ancient unaltered language of the two principal Scandinavian dialects—the Danish and the Swedish. The Icelandic poet, John Thorlakson, who has translated Milton's Paradise Lost into the Icelandic language, lives at Baegisa, in a poor cottage. The door of his room is scarcely four feet high, and the room itself but eight feet long, and six feet broad. In this room stands his bed, and close to the door, opposite a small square window, a table, on which he has written his poems. The situation of his dwelling may very truly be called poetical, being between three mountains, near streams and waterfalls, where there is on every side a prospect of mountains 4000 feet high. His whole income, from the two parishes of Baegisa and Beka, amounts to about thirty dollars (six pounds sterling). Some years ago, Thorlakson undertook a translation of Klopstock's Messiah,

of which the first fourteen books are finished; but he himself confesses, that he has not been so successful in it as with Milton.[21]

Religion.] The form and ceremonies of the Icelandic church are strictly Lutheran, though from the poverty of the people, their churches are less elegant, and a greater degree of simplicity pervades their worship, than in other Lutheran countries. The total number of parishes in Iceland amounts to 184; but as many of them occupy a great space of ground, it has been found necessary to build in some parts two or three churches in a parish, which has increased the number of churches to 305. Some of the priests have chaplains to assist them in the performance of public duty. They are all natives of the island, and are maintained partly from certain tithes raised among the peasants. The provision made for their support is exceedingly scanty. The richest living on the island does not produce 200 rix-dollars, about £42 sterling; twenty and thirty rix-dollars are the whole of the stipend annexed to many of the parishes; and there are some in which it is even as low as five.

Government.] The circumstances of Iceland have undergone little or no alteration, either in the laws or in the form of government, which was established 600 years ago. The supreme authority is intrusted to an officer who is appointed by his Danish majesty, with the title of *Stiftamtamn*, and who is bound to fill this office for the space of five years. Under the *stiftamtamn*, each of the four provinces into which the island is divided, is governed by an Amtaman, or bailiff, whose duties are the same as those of his superior, or general superintendent of the province, an officer with power similar to a lord lieutenant. Each province is divided into syssels or shires, over which the sysselmen preside. These officers collect the taxes, and are paid by a rate out of the amount collected. They hold courts of law, and, on the whole, their duty is in almost every respect the same as that of sheriffs in Scotland. In each parish there is an officer called *Hreppstiore*, whose chief business is to attend to the concerns of the poor, and to assist the sysselman in the preservation of the public peace. For the decision of petty disputes among the people, there is a certain number of persons in each parish, denominated *Forlikunarma*, who may be called official arbiters. All cases, whether civil or criminal, are first brought before the sysselman, who holds a court once a year, or oftener if necessary. In criminal cases, and in public suits, the Amtaman orders the trial, after previous examination on behalf of the Crown. From the inferior court there is an appeal to the high court of justice, which sits six times in the year, at Reykiavik. From this court there is an appeal to the superior courts at Copenhagen. The punishment of petty offences is a fine and whipping. Sheep-stealing is the most common offence. Murder is exceedingly rare; and except in cases which subject the criminal to capital punishment, he is not confined before the time of trial. With regard to property, no entail of land is allowed. When a proprietor dies, his lands are valued and divided into shares, of which the eldest son has the choice. The daughters receive an equivalent to half the portion of the son. A wife surviving her husband possesses half of his estate. Leases are not common; but letting lands from year to year is a frequent practice. The public taxes are so inconsiderable, that they

[21] We refer such of our readers as wish a specimen of Icelandic Poetry, to the Report of the British and Foreign Bible Society for 1818.

are not sufficient to defray the expenses of the civil establishment. The taxes for the maintenance of the poor, are much more severe on the inhabitants, than those levied for the public.[22] The money-currency is very scarce in Iceland; hence it arises that all accounts are paid in dried fish, or in very coarse woollen stuffs, called *wadmal.* Twenty-eight fishes of two pounds weight each, or thirty yards of wadmal, are equal in value to one thaler, or dollar.

Reykiavik.] Reykiavik, the capital of Iceland, which, about fifty years ago, consisted merely of a few houses, has lately risen into some notice, having become the residence of the governor, the episcopal see, the seat of the supreme court of judicature, and the principal mercantile station on the island. It is situated on the south side of a considerable inlet of the Faxé-fiorden, upon a low marshy ground, between two eminences that are partially covered with grass, and studded with a number of small cottages. It consists of two streets. The dwelling-houses, with two exceptions, are all constructed of wood, in the Norwegian fashion, and have generally a storehouse or two, and a small garden attached to them.[23] "Reykiavik is unquestionably the worst place," says Dr Henderson, however, "to spend the winter in Iceland. Being the resort of a number of foreigners, few of whom have had any education, and who frequent the

[22] Some curious particulars relative to the ancient state of this island, have been published by Mr Vhorkelyn, a native of the country, "Iceland," he says, "for a very considerable space of time, viz. from the beginning of the 10th, to the middle of the 13th century, was under a republican form of government. At first, the father, or head of every family, was an absolute sovereign; but in the progress of population and improvement, it became necessary to form certain regulations for the settlement of disputes, concerning the frontiers of different estates. For this purpose, the heads of the families concerned assembled themselves, and formed the outlines of a republic. In the meantime, they carried on a prosperous trade to different parts; sending ships even to the Levant and to Constantinople, at that time celebrated as the only seat of literature in the world. Deputies were likewise sent from this island over land to that capital, for the improvement of their laws and civilization; and thus a whole century before the first crusade. In these ancient Icelandic laws, therefore, we meet with evident traces of those of the Greeks and Romans. For example, besides a body of laws, which were written every third year to the people, they had two men chosen annually by the heads of families, with consular power, not only to enforce the laws then in being, but when these proved deficient, to act as necessity required. These laws did not inflict capital punishments upon any person. Murderers were banished to the *wood;* that is, to the interior and uncultivated parts of the island, where no person was allowed to approach them, within a certain number of fathoms. In cases of banishment for lesser crimes, the friends of the offender were allowed to supply him with necessaries. The culprit, however, might be killed by any person who found him without his bounds; and he might even be hunted and destroyed in his sanctuary, provided he did not withdraw himself from the island within a year after his sentence, which it was supposed he might accomplish by means of the annual arrival and departure of ships. Every man's person was free, until he had forfeited his rights by some crime against society; and so great was their respect for independence, that much indulgence was allowed for the power of passion. If any provoking word or behaviour had been used, no punishment was inflicted on the party who resented it, even though he should have killed his adversary. By the laws, the poor were committed to the protection of their nearest kindred, who had a right to their labour, as far as they were able to work, and afterwards to indemnification, if the poor person should acquire any property. Children were obliged to maintain their parents in their old age: but if the latter had neglected to give them good education, they were absolved from this duty."

[23] It is rather a striking coincidence, that the capital of Iceland should, as it were by mere accident, happen to be built on the very spot where Ingolf, the first of the Norwegian emigrants that settled on the island, fixed his habitation. In conformity to a superstitious practice common in those days, that adventurer, on approaching the eastern coast, threw the wooden pillars of his former habitation into the sea, vowing he would settle wherever they were cast on shore. After some time, his slaves, whom he sent in search of them, found them driven up at this place, and Ingolf, true to his vow, fixed his abode at *Reykiavik,* though reproached by his own slaves for preferring so rugged and barren a spot, to the fine districts they had passed on their way from the east.

island solely for purposes of gain, it not only presents a lamentable blank to the view of the religious observer, but is totally devoid of every source of intellectual gratification. The foreign residents generally idle away the short-lived day with the tobacco pipe in their mouths, and spend the evening in playing at cards, and drinking punch."

Holm.] In consequence of the changes which took place in the ecclesiastical government of the island, the once respectable and far-famed Holm now begins to wear the appearance of a deserted village.

Husavik.] Husavik, which is famous for being the place where Gardar, the second adventurer to Iceland, fixed his habitation, and spent the winter of 864, is situated at the termination of an inlet, on the east side of the Skialfandafiorden, and consists of several stately wooden houses, a sulphur manufactory, and a number of cottages belonging to the workmen. Lying at the height of more than an hundred feet above the level of the sea, the different articles of commerce are here removed to and from the boats by means of a crane, which is fixed on the brow of a perpendicular precipice close to the storehouses. The harbour is reckoned one of the most dangerous on the island, on account of the rocks in the entrance, and its exposure to the north and north-west winds, by which enormous masses of Greenland ice are driven into it. About twenty miles from the north coast of Iceland, we find Green Island, which affords good anchorage. About forty-five leagues to the southward, there existed in ancient times the Island of Bus, which is supposed to have disappeared within the last fifty years.

Authorities.] We have abundance of fabulous accounts of this island. The best sources of information we possess regarding it are the Letters of Sir Joseph Banks; Dr Hooker's Tour, published in 1813; Dr Henderson's Journal; and Dr Gliemanni's account, published in Treuttel and Wurtz's Annual Cabinet of Modern Foreign Voyages and Travels, vol. ii. 1826. We may also mention M. Stepensen's Island i del attende Aarhundrede, etc., Copenhagen, 1808. A very magnificent map of Iceland has been recently published, under the authority of the Danish government, by Admiral Löwernörn.

SWEDEN AND NORWAY.

THAT great semicircular continent which stretches from Cape North, the most extreme point of the European continent, into the Baltic, and is united to Russia on the N. E. formed, until very lately, two separate kingdoms, and may still be regarded in the same point of view. The eastern and larger country is called Sweden, and the western Norway. Both these kingdoms continued independent of each other from the dissolution of the treaty of Calmar: Norway being united to the crown of Denmark, and Sweden forming an independent kingdom; and although united in 1814 under one ruler, they yet remain distinct kingdoms in as far as regards their political constitution and administration,—the law which binds the Swede, affecting not the Norwegian, and it being possible for either country to go to war without implicating the other in the contest. We shall therefore describe these kingdoms separately in our details.

Extent and Population.] The united kingdoms of Sweden and Norway, possess, next to Russia, the greatest superficial extent of territory among the kingdoms of Europe. The total superficies of the two countries, is estimated at 323,360 square miles; of which 172,189 belong to Sweden, and 151,171 to Norway. But the population bears a small proportion to this extent, being reckoned by Balbi in 1826 at 3,866,000 souls, of whom only about 2,790,000 belong to Sweden, and 1,076,000 to Norway. Though in the southern provinces of Sweden, the number of persons to the square mile is 38, and in the middle provinces nearly 21, the northern give only $1\frac{1}{3}$, which reduces the population for the whole of Sweden to little more than 14 persons per square mile, or about one fourteenth of the relative density of population in Great Britain; while Norway exhibits an almost doubly greater disproportion of population. We may here remark, that though a common interest evidently ought to unite the two nations of whose geography we are now to treat, so great is the national antipathy on either side that it would seem, at present, that many centuries of union under one Crown must elapse, before the Swedes and Norwegians will come to look upon each other as brethren.

SWEDEN.

Name, Boundaries.] SWEDEN, or, as it is called in the language of the country, *Swerige*, or *Swea Rike*, which means, 'the land of the Swiar,' or Swear, or Sweones, is situated entirely within the cold zone of northern Europe. It is bounded on the N. and N. E. by Russia; on the E. by the Gulf of Bothnia; on the S. E. and S. by the Baltic; on the S. W.

by the Sound, the Cattogat, and the German Ocean, and on the W. by Norway, from which it is separated by an extensive range of mountains. On the Russian side, Sweden is protected from sudden invasion by extensive and almost pathless wilds; and its iron-bound coasts are in few places accessible to invading fleets. Its greatest length, from the frontiers of Lapland on the N. E. to Schonen on the S. W. is about 1,200 miles; and its greatest breadth, since the loss of Finland, 350 miles.

CHAP. I.—HISTORY.

Early History.] THE aboriginal inhabitants of Sweden, were of Finnic and Lapponian extraction. They appear to have gradually retreated into the higher latitudes before the advancing population of the German nations, among whom the Goths and Swedes attained an early preponderance, and subdued the other tribes. The conquerors were governed by chiefs of traditionary descent from the fabulous family of the Ynglienger sprung from a son of Odin. In the 5th century, we find them assuming the title of kings of Upsala; and they governed Sweden under this name till 1068. Olof was the first to introduce, in 994, a regular form of government, and to embrace Christianity. At this period, however, the Goths and the Swedes remained distinct tribes, and for many centuries downwards, the feuds of the two rival nations distracted the kingdom. In 1250, the powerful family of the Folkungen having mounted the throne, the rivalry of the two hostile parties gave way, and the Goths and Swedes became one nation. At the same time the succession to the throne was fixed. At this period, the limits of Sweden only extended to Helsingland; but Eric XI. having subdued, in 1248, the interior districts of Finland, and Torkel Knutsen, the guardian of Birgir, having reduced Carelia in 1293, Sweden became the immediate neighbour of Russia towards the close of the 13th century. Magnus Smek, in 1332, acquired Schonen, Blekingen, and Halland; but these provinces were again lost in 1360. Tired of his oppressions, the Swedes revolted in 1363, and gave the Crown to his nephew, Albert of Mecklenburg. The latter prince likewise failed to satisfy the expectations of the Swedish States, and in 1388 fell in battle against the Danes, whom his discontented subjects had called to their help. The following year, Queen Margaret of Denmark and Norway united Sweden with these two kingdoms, which union was farther consolidated by the treaty of Calmar in 1397. Many troubles and rebellions were the consequence of this union, and in 1448 Sweden and Norway chose their own king in the person of Charles Knutsen. After Charles' death, several members of the family of Sture were successively elevated to the throne, under the title of Regents, though in reality with all the power and prerogatives of royalty.

Middle History.] In 1520, Christian II. of Denmark, after having successfully invaded Sweden, was recognised king of that country by the Swedish States. This monarch soon excited the displeasure of his new subjects, having, during the solemnities of his coronation, caused 94 Swedes of noble family to be put to death at Stockholm, notwithstanding the existence of a guarantee of amnesty. Among the hostages who had been treacherously carried prisoners to Denmark was Gustavus Vasa, one of those superior spirits who, by their penetrating intellect and intre-

pidity of soul, are qualified for obtaining and preserving ascendency in turbulent times. This nobleman placed himself at the head of his discontented countrymen in 1521; and having succeeded in expelling the Danish arms from Sweden, was proclaimed king in 1523. Under the auspices of this Swedish Alfred, the reformation was introduced into the country,—the extensive estates of the Church added to the Crown domains,—and commerce and navigation promoted by alliances with England and Holland. The succession to the crown was secured to his descendants in 1544. His son and successor Eric XIV. who governed from 1560 to 1568, added Esthonia to Sweden: and in 1561 introduced the dignities of count and baron, till then unknown in the country. The jealous temper and tyrannical actions of this prince alienated the affections of his subjects. His brother John II. succeeded to the throne in 1568, and governed till 1592. By the peace of Stettin in 1570, John yielded Schonen, Halland, Blekingen, Herjedalen, and Gothland to Denmark; and in 1580 he embraced Catholicism, in which religion he caused his son Sigismund to be educated. Sigismund having accepted the crown of Poland, was in 1602 driven from the throne of Sweden by his ambitious uncle Charles, a zealous Lutheran, who was crowned in 1604 under the name of Charles IX. He was succeeded by the great Gustavus Adolphus.

Gustavus Adolphus.] This hero mounted the throne in his eighteenth year, and reigned from 1611 to 1632. Under his management the kingdom acquired a degree of solidity formerly unknown to it, although his frequent wars with Russia, Denmark, and Poland, checked the progress of population and civilization. In 1613, Gustavus concluded peace with Denmark, and in 1617 a treaty with Russia, by which he gained Ingermannland. By the intervention of Richelieu, he concluded an armistice with Poland in 1629, by which he obtained Livonia, and saw the great object of his wishes within his grasp, in his being enabled to hasten to the aid of the protestant princes of Germany, in 1630, and by this movement to lay the foundation of that influence which Sweden was afterwards to exert over the political destinies of the north-west of Europe. On the 24th of June, 1630, Gustavus landed with 30,000 men on the coast of Pomerania, advanced successfully, and, being joined by several of the German princes, gained, on the 7th September, 1631, with the assistance of the Saxon forces, the great victory of Breitenfeld, over the imperial general Tilly. The king of Sweden was every where hailed by the protestants as their deliverer; but, painful as it is to expose the weaknesses of great men, it is but too clear that after this victory the designs of Gustavus were directed to his own personal aggrandizement in Germany. His schemes were, however, cut short by his death in the battle of Lutzen, on the 6th November, 1632, where he was opposed to Wallenstein, the greatest general of the age. The victorious issue of that celebrated fight, was not witnessed by the Swedish king, who, in all probability, fell by the hand of a traitor in the hour of victory.

Christina.] Gustavus was succeeded by his infant daughter, Christina, during whose minority the talented chancellor Oxenstierna held the reins of government, and conducted the war in Germany, in which the heroic generals Bernard of Weimar, Banner, Wrangel, Torstensen, and Konigsmark, exalted the reputation of the Swedish name, and ended the contest gloriously for Sweden, as she thereby acquired the duchies of Bremen and Verden, all Upper with part of Lower Pomerania, the city of Wismar,

and the isle of Rugen, together with 5,000,000 crowns to the army, as a recompense for their toils and services; besides acquiring, in the course of a war with Denmark, the islands of Gothland and Oesel. Before the peace, she maintained above 100 garrisons in Germany, and could lay under contribution the whole country, from the Baltic to the Lake of Constance; besides supporting an army of 70,000 veterans, each one of whom was almost qualified to be a general. Such was the state of Sweden, at the peace of Munster, in 1648. Eccentricity and inconstancy were the distinguishing features of Christina's character; she was a favourer of learning and science, and affected a love of philosophic repose. Having renounced that religion in the defence of which Sweden had lavished so much blood and treasure, and her illustrious father lost his life, she abdicated her throne in 1654, and retired to Rome, where she resided for the remainder of her days, and died on the 19th April, 1689.

Charles Gustavus.] She was succeeded by her cousin, the Count Palatine of Zweibrücken, Charles Gustavus, who reigned from 1654 to 1660. Entering into a war with John Casimir, king of Poland, in 1655, he overran the whole kingdom in three months; and Casimir was forced to retire to Silesia, and abdicate the Polish crown. His rapid conquest exciting the jealousy of Russia, Denmark, and Brandenburg, an alliance was formed against him. In Livonia the Swedes were attacked by the Russians on the side of Holstein, in Bremen by the Danes, and in Prussia by the Elector of Brandenburg; while the Austrians marched an army into Poland to assist John Casimir. Charles, however, was generally successful against this coalition. Having subdued all the Danish islands in the Baltic, he besieged Copenhagen twice; but, when the Danish capital was upon the point of surrendering, it was relieved by the Dutch fleet, which beat the Swedish armament in the Sound, and forced its way into the harbour of Copenhagen. England in the meantime declared for Sweden; but Brandenburg attacked Pomerania, and the German emperor aided Denmark. Nevertheless, Charles renewed the war in 1660; but his sudden death, on the 22d February, after a turbulent and active reign of six years, restored peace to the North. He was succeeded by his son Charles, then a minor.

Charles XI.] Immediately after his death, the regency concluded a peace at Oliva, on the 3d of May, 1660, with the Poles, in which Casimir renounced his pretensions to the crowns of Sweden, and Livonia and Esthonia. The peace of Copenhagen, 6th June, 1660, assured to Sweden, Schonen, Halland, Blekingen, and Bahus; the isle of Bornholm, and Drontheim in Norway, were restored to Denmark; and a free passage through the Sound granted to the Swedes. Soon after this the disputes with the Dutch were amicably settled, and peace concluded with the Russians at Cordis. Nothing very remarkable occurred during his reign; only, that Charles XI. was led into a war with the Emperor, from his connection with France, which terminated in the peace of Nimeguen, in 1679; and another, shortly afterwards, with the Danes, with whom he had been engaged in an indecisive and protracted war for some years. In 1680, Charles married Eleanora, the daughter of the Danish monarch. He now applied himself to increasing the army and navy, and replenishing the treasury, and passed the rest of his reign in external tranquillity, till his death, on the 15th April, 1697, when he was succeeded by his son, the famous Charles XII., then only 15 years of age.

Charles XII.] Sweden was at the height of her prosperity and glory, when Charles ascended the throne. He was the absolute master of Sweden, Finland, Carelia, Ingermannland, Livonia, the duchies of Bremen and Verden, the isle of Rugen, and great part of Pomerania: all of which had been secured to his Crown by the treaties of Munster, Oliva, and Ryswick, and the terror of the Swedish arms. His subjects were poor, but loyal, brave, and hardy; his finances in excellent order; and the administration in the hands of able ministers. But the prosperity of Sweden, in the hands of a monarch merely warlike, could not be of long duration. Charles, though a warrior, was no statesman, and his frantic exploits have more the appearance of romance than history. He governed Sweden from 1697 to 1718. A secret alliance formed against him by the czar, Peter I., the king of Poland, Augustus II., and the king of Denmark, Frederic IV., occasioned the Northern war, which lasted from 1700 to 1720, and of which Charles did not witness the termination. Denmark invaded Sleswick, but Charles succeeded in his attack upon Copenhagen, and the peace of Travendahl, 10th of August, 1700, replaced these kingdoms on the *status quo*. The king of Poland intended the reconquest of Livonia, and Peter I. opened the war by laying siege to Narva; but Charles, after having concluded peace with Denmark, hastened thither, and, with a handful of 8000 Swedes, defeated a body of 80,000 Russians. After several victories in Saxony, the Swedish monarch took Warsaw, and caused the young Stanislaus to be proclaimed king of Poland, on the 2d July, 1704. Peter in the meanwhile conquered Ingermannland, founded Petersburg, and entered Livonia. Charles thereupon entered the Ukraine, in concert with Mazeppa, the hetman of the Cossacks; but a body of 19,000 Swedes, who were marching to his support, having been defeated by Peter at Slop, Charles, who was then employed in the siege of Pultava, was entirely routed on the 8th of July, 1709. On this decisive day, the political preponderance of Sweden in the North passed to Russia. Charles fled to Bender, where he placed himself under the protection of Sultan Achmet III. Saxony, and the late king of Poland, in the meanwhile renewed the war; the Russian armies advanced into Livonia and Finland; the Danes attacked Wismar, and the Saxons, Stralsund. The former conquered the duchy of Bremen; but the Swedish general, Steenbock, landed upon Rugen, and, having concluded an armistice with Saxony and Russia, defeated the Danes at Gadebusch, and destroyed Altona. On the 16th May, 1713, Steenbock's career was cut short by the united forces of the Danes, Russians, and Saxons, who took him and his whole army prisoners at Oldesworth. After a residence of five years at Bender, Charles suddenly appeared at Stralsund, on the 11th November, 1714. His first demand was for the restoration of Stettin, which Frederic William I. of Prussia had seized during his absence. The latter, thereupon, united with Russia and Saxony, and conquered Stralsund and Rugen. Denmark sold the conquered Swedish principalities of Bremen and Verden, to George I. of England, who also, by the taking of Wismar, declared himself opposed to Charles. The Swedish monarch now tried to enter into negotiation with his most powerful enemy, the czar of Russia, and hoped to indemnify himself by the conquest of Norway, which he invaded in 1718. But while employed in the siege of Friedrickshall, he was shot, probably by the hand of an assassin, on the 13th of November.

Ulrica Eleanora.] Ulrica Eleanora, the younger sister of Charles,

was elected queen on the death of her brother, by the Swedish States, who passed over the Duke Frederic of Holstein, the son of an elder but deceased sister. From Eleanora the States demanded, and obtained, a formal renunciation of the unlimited power formerly claimed by the Crown, and she subsequently resigned the government in favour of her husband, Frederic, prince of Hesse-Cassel, whom the States recognized as king of Sweden, on the 2d May, 1720. Shortly after this event the Northern war was terminated by several distinct treaties of peace; but the aristocracy of the Swedish senate—which had now regained the ascendency it had enjoyed till 1680—threw many obstacles in the way of the improvement of the State, both in its external and internal relations. Hanover kept the principalities of Bremen and Verden after the peace; but paid an indemnity of 1,000,000 of dollars to Sweden. Prussia retained Lower Pomerania as far as the river Peene, Stettin, and the islands of Usedom and Wollin; but paid 2,000,000 of dollars to Sweden. Denmark gave back Wismar, Stralsund, and Rugen; and Sweden paid 600,000 dollars to Denmark, and yielded its claim to the tolls of the Sound. Russia kept Livonia, Esthonia, and Ingermannland, and paid 2,000,000 dollars to Sweden. Under the prevalence of the Swedish aristocracy, two parties, distinguished by the appellations *hats* and *bonnets*, distracted the councils of the State. It was owing to the preponderance of the former of these parties, that a ruinous war again commenced with Russia in 1741. Sweden soon found it necessary to make advances for a peace; but Elizabeth of Russia refused to listen to any proposals until the succession to the throne should be determined, the queen Ulrica Eleanora having died on the 5th December, 1741, without issue. The Swedish States thereupon elected the Duke Charles Peter of Holstein, the grandson of Charles' eldest sister; but this prince was called by Elizabeth to Petersburg, and, after having embraced the Greek religion, was named by her Grand Duke of the Russian empire; and the succession of the Swedish Crown was thereupon fixed, under Russian influence, upon the Duke of Holstein and Bishop of Lubec, Adolphus Frederic, a lineal descendant, by the mother's side, of Gustavus Vasa. Peace was thereupon concluded with Russia, at Abo, on the 7th August, 1743; and Sweden yielded to Russia the whole of Finland to the river Kymen. Frederic, the husband of Ulrica, died on the 6th April, 1751, and the influence of the aristocracy continued undiminished during the reign of his successor, Adolphus Frederic, who reigned from 1751 to 1771. The royal prerogatives were still more limited by the party of the hats, who urged the participation of Sweden in the unlucky war against Prussia, which was terminated by the peace of Hamburg, on the 22d May, 1762.

Gustavus III.] Gustavus III., the son of Adolphus Frederic, mounted the throne on the 12th February, 1771. This prince resolved, by a bold stroke, to put an end to the intestine divisions which had so long troubled the kingdom. On the 19th August, 1772, he placed the senate under restriction, and declared the constitution of 1680 to be again the law of the kingdom, relinquishing only the unlimited sovereignty, which he magnanimously shared with the States, now divided into the four classes of nobility, clergy, citizens, and peasantry. Gustavus likewise placed the legislative power, and the right of voting for offensive war, in the hands of the States, retaining to himself the executive. From this period the energies of the kingdom gained strength, and although the

nobility were disaffected towards the king, the citizens and peasantry remained devoted to him. Under the protection of the armed Northern neutrality, Swedish commerce and industry revived. In 1784, Sweden obtained from France the little Island of Bartholomew in the Antilles, where a free port was established. Unfortunately, however, for their country, the power of the nobility gathered daily strength; and Gustavus, with the view of thwarting their designs, exercised nearly unlimited authority in the national councils. In 1788, he suddenly attacked Russia. Victory remained undecided in the naval engagement in the Gulf of Finland on the 17th July; and the Swedish nobles who served in the marine refused to serve farther in a war originating solely in the king's will. A momentary armistice was the consequence; during which, Gustavus called together a diet at Stockholm, on the 22d February, 1789, in which he obtained, by the preponderance of the three inferior States, a declaration replacing in his hands an almost unlimited power. For this piece of service, the king rewarded the three States with eligibility to public offices, and equal rights with the nobility in respect of landed property. Dissatisfied with the result of this diet, the nobles generally retired to their estates. Already, in 1788, a Danish army had invaded Sweden, in consequence of a sacred alliance with Russia; but the threats of England and Prussia compelled Denmark to resume her previous neutrality. Gustavus was now in a condition to prosecute the war with Russia, in which both parties confined their operations to naval movements. Sweden gained several advantages over her formidable adversary; but, being unsupported by England and Prussia, Gustavus concluded a peace at Werelä, on the 14th August, 1790, upon the *status quo*, and on the 19th October following, entered into a treaty of defensive alliance with Russia. In the diet at Gefle, held in 1792, Gustavus obtained a full recognition by the States of the national debt; but on the 16th of March he was assassinated at a masquerade, by a pistol-shot from the hand of Ankerström,—a deed unquestionably prompted by the long-cherished hatred of the aristocratical party. He died on the 29th of March, and was succeeded by his son, Gustavus IV., during whose minority, his uncle the Duke Charles of Sudermania acted as regent.

Recent History—Gustavus IV.] The regent Charles wisely departed from the plan of his late brother to take part in the opposition to France, and entered into an alliance with Denmark, on the 27th March, 1794, for maintaining the neutral navigation of the Baltic. A party which had been formed against him at home, compelled the regent to act with circumspection and severity; at the same time, he maintained the independence of the kingdom against the threats of Russia, who insisted on his joining the league against France. His line of policy, however, was completely departed from on Gustavus IV. assuming the reins of government on the 1st November, 1796. The party of Armfeld, which had opposed the regent, was received into favour, and an alliance with Pau I. of Russia entered into, on the 24th October, 1799. At the diet of Nörköping, in 1800, Gustavus got himself confirmed in the sovereignty as it had been possessed by his father. On the 16th December, 1800, Sweden joined the armed Northern neutrality, yet remained inactive on the appearance of the British flag in the Sound. After the death of Paul he joined in a treaty of commerce with England and Russia, concluded on the 13th March, 1802; upon which England took off the

embargo it had laid upon Swedish ships, and restored the Island of St Bartholomew in the West Indies, which it had occupied on the breaking out of hostilities. Gustavus had previously sold Wismar to Mecklenburg for 1,200,000 dollars, and no longer able to conceal his dislike to Napoleon, he now joined the interest of Great Britain, and entered the coalition against France in 1805, with British subsidies. On Prussia taking possession of Hanover, Gustavus wished to retain Lauenburg in security of his English subsidies; but he was obliged to relinquish that possession to Prussia in 1806. The same year he abolished the German constitution in Pomerania and introduced that of Sweden; but he took no part in the war which Prussia began against France. The following year he meditated a movement, in concert with the English and Prussian arms, on the rear of the French forces; but the decisive battle of Jena rendered such a measure abortive, and he was subsequently obliged to evacuate Pomerania and the Isle of Rugen. Having entered into an alliance with England on the 8th February, 1808, Denmark and Russia declared war against Gustavus on the 10th of the same month, Alexander having in vain endeavoured to persuade him to close the Baltic against English vessels till a general naval peace should be concluded, agreeably to the terms of the treaties of 1780 and 1800. Gustavus, on the contrary, refused to co-operate with the other Northern powers so long as French forces appeared on the coasts of the Baltic. The Russian forces, amounting to 60,000 men, entered Finland, which they conquered in the midst of winter, and Alexander, on the 16th of March, 1808, declared this country to form an integral part of the Russian empire, Gustavus having previously arrested the Russian ambassador at Stockholm and seized upon his papers. The military aid which Great Britain had destined for Sweden during this crisis, was lost by the absurd behaviour of Gustavus to the British general. Notwithstanding of these reverses, he undertook the conquest of Norway in April, 1808; but the spirited defence made by the prince Christian Augustus of Sleswick-Holstein, preserved this kingdom to Denmark. A disadvantageous war, the exhausted finances, and his abominable behaviour towards his own guards, produced the dethronement of Gustavus on the 13th April, 1809. The Duke of Sudermania was again named regent, and, on the 6th of June, Gustavus IV. and his posterity were for ever excluded, by an act of the diet, from the Swedish throne, which the regent thereupon mounted under the name of Charles XIII.

Charles XIII.] By the new constitution, proclaimed on the 7th June, 1809, the royal power was limited to its prerogatives previous to 1773. As the aged king was without an heir, the prince Augustus of Sleswick-Holstein was named by the States heir to the crown: which election he consented to after the re-establishment of peace in the North. By the peace with Russia, concluded at Fredericsham on the 7th September, 1809, Sweden yielded the whole of Finland, Eastern Bothnia, and also Eastern Lapland, with the island of Aland, to Russia. On the 10th of December, peace was concluded with Denmark; and on the 6th of January, 1810, France, by the peace of Paris, restored Pomerania and Rugen to Sweden; upon which, Sweden joined the continental system against England.

The sudden death of the prince royal on the 28th of May, 1810, led the Swedish States, on the 26th August following, to elect the French marshal, Bernadotte, prince of Ponto Corvo, heir to the Crown of Sweden;

who, after having embraced the Lutheran creed, was adopted by the king, as heir presumptive, under the name of Charles John. The prince soon acquired a powerful influence in the direction of the government. The declaration of war against England on the 7th November, 1810, was followed by the peace of 12th July, 1812, upon the occupation of Swedish Pomerania by the French. Sweden, which had obtained the promise of Norway for its participation in the war against Napoleon, only assumed an active part in the war in 1813. The Crown Prince, at the head of the army of the North, appeared in several battles against Napoleon, particularly in that of Leipsic. He then directed his arms against Denmark, which, on account of its alliance with France, had declared war against Sweden, and forced the king, Frederic VI., after having conquered Holstein and Sleswick, to sign the peace of Kiel, concluded on the 14th January, 1814, by which Sweden obtained Norway and resigned Swedish Pomerania to Denmark. The Norwegians made indeed an attempt, under the prince Christian Frederic of Holstein-Sleswick—whom they had elected king on the 29th May, 1814—to form an independent kingdom with a constitution proposed by the diet; but, forsaken by all European powers, that prince was obliged to leave Norway on the 16th of August, and the Swedish army advancing, Norway was formally united to the Swedish crown on the 21st October, 1814. The new Norwegian constitution was however guaranteed on the 4th November following, under the modifications rendered necessary by the union with Sweden. Although the Crown Prince did not appear in the Congress of Vienna, where the former king, Gustavus IV., presented, through the British admiral, Sir Sydney Smith, a memorial in which he urged the rights of his minor son to the Swedish throne, and although in Sweden itself a considerable party was formed against the Crown Prince, yet the friendly relations between Russia and Sweden were uninterrupted, and the latter joined the Holy Alliance on the 21st May, 1816.

Charles XIV.] Charles XIII. died on the 5th February, 1818, and Charles John XIV. mounted the Swedish throne, although opposed by the Bourbon influence. By a treaty with Great Britain, dated the 9th November, 1825, the king of Sweden engaged to cause penal laws to be passed against the slave trade. In 1824, Charles XIV. named his son the prince Oscar, viceroy of Norway; and on the 18th June, 1827, the Crown Princess, daughter of Prince Eugene, former viceroy of Italy, was delivered of a son, who has received the name of Francis Gustavus Oscar, and the title of Duke of Upland.

CHAP. II.—PHYSICAL FEATURES—CLIMATE, SOIL, AND PRODUCTIONS.

From the coast of the North Sea to the Wener and Hielmar Lakes, and even to the Bothnian Gulf, Scandinavia presents an inclined plane, whose summit is terminated by the grand Norwegian chain, which runs nearly parallel with the coast, at the distance of from 30 to 40 miles from Cape Lindenas to the confines of Lapland. From this ridge—of an elevation from 6000 to 8000 feet—the slope is constantly towards the S. S. W. and the S. E. A great part of this slope presents planes of various elevation, separated rather by escarpments than

by chains. Heddemark in Norway, and Jämtland in Sweden, are levels of the elevation of 3000 feet. Between these two lofty plains runs a branch of the great Scandinavian chain, which, rising to 5000 or 6000 feet, first divides Norway from Sweden, and afterwards Dalecarlia from Wermeland. In the south this chain receives the appellation of the *Seve* mountains; and in the north is known by the name of the *Kiolen* or *Kolen*. The great lakes of Gothland occupy basins, at the termination of the chains. Sweden is intersected with numerous marshes, hills, and lakes; and beyond the 60th degree appear vast tracts of wild and uninhabited land, approximating as we proceed northwards to the sterility and bleak aspect of the polar districts. Nature in various places of this country presents the wildest and most sublime features; but in general the scenery is remarkably uniform. The coasts surrounding the Bothnian Gulf and the Baltic are bold and rugged, indented with numerous bays, and stretching out into imposing promontories; while the sea itself is filled with innumerable islands, and rocks or *skares*, which serve as a natural bulwark to the coasts. The shores of Christianstadt, Malmö, and Halland are indeed destitute of these skares, but are nevertheless high and well-protected.

Lapland, according to Wahlenberg, may be divided into five zones or belts, concentric with the Bothnian Gulf; and differing from each other in appearance, climate, and productions. The first, extending obliquely round the Gulf of Bothnia, and generally 80 miles broad, is covered with forests of the spruce and Scotch fir. The second, higher and colder than the first, and only from 6 to 8 miles broad, contains the Scotch fir. The third, still higher than the two preceding, is about 12 miles in breadth, except to the N. E. of Enontekis, where it is 40 miles wide. It produces birches but no pines. The fourth, nearly of the same breadth, but higher than any of the preceding, produces only the *salix glauca*, a species of willow peculiar to very cold climates. The fifth, and the farthest from the Gulf of Bothnia, extends along the north side of Lapland, and is the most elevated tract of the whole, the greater part of it being above the limit of constant congelation. It produces no trees, and scarcely any vegetation whatever, except a few hardy plants, where the snow has been melted. In none of the three first zones is the height above the level of the sea considerable. The highest mountain in these three belts is only 1,140 feet above the level of the sea. The church of Enontekis is 1,429 feet above the level of the sea, and thence to the summit of the Lapland Alps the ground rises constantly, but so gradually that it is practicable to go in a boat to the Lake Kielisgarvi, which is in so elevated a situation that the birch-tree is scarcely to be found on the shores. The Lapland mountains are a continuation of the great chain which runs through Sweden and Norway, and extends in some of its branches to Finland and Russia. These mountains passing through the south of Lapland, as high as the latitude of Tornea, are nearly of equal height through the whole of their extent, none being lower than 2,132 feet above the level of the sea: but the most elevated mountains occur in the southern part of Luleä Lapmark. One of these is the highest glacier in Sweden, and has been long regarded, by the superstitious natives, with awe and veneration, being denominated in the Lapponean language *Sulitelma*, or 'the Hill of God.'[1] This Alp is situated in N. Lat. 67° 10′, near the margin of a

[1] This appellation *Sulitelma*, and *Benledi*, that of a remarkable mountain of Perthshire, in Scotland, have the same original meaning in both the Lapponean and Gaelic

lake communicating with the Western Ocean. It forms three peaks of the respective altitudes of 5,760, 5,870 and 6,178 English feet. These peaks of the Kiolen are covered with an accumulation of eternal snow. The sides of the mountain, at the altitude of 2,500 feet, exhibit real glaciers. The ice itself is perfectly clear and colourless, but its clefts appear blue. Near the base of this mountain, the lake Lommi-jauri, elevated 2,265 feet above the level of the sea, has snow lying along its banks during the whole year. Half-a-degree farther north, the Viri-jauri, at an elevation of 1,900 feet, appears covered with hard ice in the middle of summer. These observations of Wahlenberg seem to harmonize with the theory that gives from 2,230 to 2,325 feet, for the height of the mean boundary of congelation in these latitudes.

To the N. of Sulitelma is another immense glacier, named Olmajalos, 5,543 feet high; and Tulpajegna, a very extensive one, is 4,050 feet of altitude. Those of Gesetsjack, Pernetjack, and Ridaljack, to the N. of Tulpajegna, are supposed to be little inferior in height; but from 68° 20′ of N. Lat., the Alpine range, though continued in an almost uninterrupted line to the N. Cape, diminishes in elevation as it approaches the Frozen Ocean. Of the maritime Alps, which occupy the western and northern parts of Lapland, the principal chain, extending from the insular promontory of Loffoden, and the western side of the Alten Fiord, contains many mountains rising above the limit of perpetual snow, and bears glaciers immediately above the sea. The highest of these are the Alps of Lyngen, 4,264 feet high.

Seas.] Sweden is washed by two seas,—the German Ocean, and the Baltic. The former on the S.W., forms between Zealand and Halland the large stormy bay, called the Cattegat, of which we have already spoken, and is connected with the Baltic by the Sound, in which lie the Swedish Island of Hween, and several inhabited islands on the coast of Göteborg, such as Tjorn, Orust, Karingö, the Koster Island, &c. The Baltic, besides a number of Skares, contains the two Swedish Islands of Gothland and Oeland, and forms in the N. W. the Gulf of Bothnia, at the entrance of which lies the group of the Aland Islands. This gulf has almost every where from 20 to 50 fathoms water.

Rivers.] None of the Swedish rivers have an extensive course. They all run to the S. or E., from the Lapland and Norwegian mountains. Some of them, rising from great lakes, are of considerable magnitude; but their navigation is impeded by the number of cataracts which distinguish the river-courses in this country. The largest stream seems to be that of the Tornea, which is now the inland boundary on the side of Russia, and is upwards of a mile wide at its mouth. The Lula falls into the N. W. end of the same gulf, after a course of 250 British miles, from W. to E. There is a fall in this river which is the greatest in Europe, being an uninterrupted perpendicular descent of 40 feet, at a spot where the stream is above half-a-mile broad. The Kalix, Piteä, and Umeä rivers, discharge themselves into the western side of the same gulf. The most considerable streams in Sweden Proper, are those which flow from lakes, and which are called in the native language *elbs* or *elvs*.[2] Of these the largest are the Göta, the Angermanna, and the

languages—the 'Hill of God:' the ancient inhabitants of both countries having been accustomed annually to perform religious rites on their summits.

[2] "By an error common in Swedish maps, it is customary to write Umeä, or *Umeæ elv*, *Torneæ elv*, which implies more than is necessary; the terminating diphthong

Dal. The latter stream is the most important river of Sweden, consisting of two conjunct streams, the eastern and western Dal, which rise in the Norwegian Alps, give name to the province of Dalarn or Dalecarlia, and fall into the Bothnian Gulf, 10 miles to the S. E. of Gefle, after a course of 260 miles; presenting near the mouth, a celebrated fall of 40 feet perpendicular, and nearly a quarter of a mile broad, the effect of which is truly sublime.[3] The Angermanna, like all the principal rivers on the eastern side of the Gulf of Bothnia, runs on the mountainous barrier which, extending N. and S., divides Scandinavia into two parts, and separates Norway from Sweden. It flows through Lap'hark, and becoming augmented by streams from the numerous lakes of that province, displays near Weda, one of the finest scenes of water in the world.

Lakes.] Lakes are numerous in Sweden, and of great size. The largest is the Wener, 100 miles long, by 60 of medial breadth; in great part surrounded with forests and rocks of red granite, and 147 feet above the level of the Cattegat. It is navigable, contains many islands, and receives 24 rivers, the chief of which is the Göta, which has been made navigable by the canal of Trollhatta. The Wetter Lake equals in length the Wener, it is of great depth, but is of inferior breadth, no where exceeding 25 miles. It also has several islands, and receives about 40 small streams; its only outlet is the Motala. Its elevation above the neighbouring waters of the Baltic, has been estimated at 292 feet. The communication between the Wetter and Wener, now in progress, if executed, the German and Baltic will be united, and the dangerous navigation through the Baltic and Sound avoided. The Malar is 60 miles in length, by 18 in breadth, and contains a countless number of picturesque islands; its fine scenery is almost equal to that of Locarno in Italy. Stockholm is situated where this lake joins the sea. It is united with the Hielmar by the canal of Arboga, with the Bars by the canal of Stromsholm, and with the Baltic by the canal of Sodertelge. The most considerable lake in the north of Sweden, is that of Stor, in Jämtland. The lakes of Lapland are very numerous, and many of them of great extent and elevation. They are generally distinguished by their romantic scenery.

Mineral Springs.] There are about 360 mineral springs in Sweden, among which the baths of Medevi, and the wells of Loka Säter, Ramlösa, and Rottenby, are the most celebrated.

Climate.] In a country like Sweden, reaching from 56° 20′ to near 70° N. Lat. and so diversified in surface, the climate is necessarily various, but upon the whole healthy. In the south it differs but little from that of Scotland. In Gothland, as in the western parts of Scotland, the western gales, loaded with vapour from the Atlantic, frequently deluge the whole country; but in Sweden Proper these are less frequent, from the greater prevalence of easterly winds. The spring is a rapid and constant alternation of rain, snow, and frost; and of late years, this season

ae, or ä, pronounced *o*, in the words Umeae, Piteae, Luleae, &c., of itself, signifies 'a river:' Thus *Umeae* means the river *Ume*. In Swedish the word *beck* signifies 'a brook,' a 'small river;' *ae* signifies 'a middling river,' neither very large nor very small; afterwards *elv* means a 'large river;' but no accurate writer of the Swedish language, when the termination *ae* has been added to the name of a river, would add the word *elv*: because this is evidently a pluralism."—*Clarke*.

[3] The Dal is subject to very sudden elevation and falls: sometimes rising 6 or 7 feet in 24 hours, and on the whole from 28 to 30 feet, when the force of the current is so great as to sweep away forests and remove vast masses of granite.

has been observed to be much more intemperate than usual. The summer is short, but dry and pleasant, the heat seldom exceeding 17° or 18° of Reaumur. Autumn is the finest season. In winter the Bothnian Gulf is frozen from November to March; and travellers can cross over from Finland, by way of the Islands of Aland, upon the ice. The eastern coast has a milder temperature than the western; but the warmest and most pleasant climate is that of Schonen.[4] The climate of Lapland is singular, especially as it affects vegetation. There the temperature of the air is regulated more by the elevation above the level of the sea, and distance from the Gulf of Bothnia, than by the mere circumstance of latitude. Hence between the Bothnian Gulf and the Lapland Alps, in N. Lat. 69°, the temperature is remarkably similar throughout that whole tract. But in the maritime tract, or Finmark, which lies between these mountains and the North Sea, the heat, except in some sequestered valleys, is almost wholly regulated by the latitude. In point of temperature, therefore, Lapland may be divided into two regions, the inland and the maritime. In the former the winter is very severe, and the summer very hot; in the latter the winter is comparatively mild, and the summer cold; the one being influenced by the temperature of the Frozen Ocean, and the other screened from its action by the circular Alpine ridge. Sometimes it happens in the Lapland Alps, that when a colder summer than usual occurs, the snow lies during the whole year; and all kinds of vegetables are totally destroyed, a few lichens, &c. excepted. The cold varies here from 15° to 30° of Reaumur. During the winter-solstice, in Lapland, when the sun continues for weeks together below the horizon, there is only a twilight of a few hours, instead of a clear daylight. These dreary nights are, however, in some degree compensated by the aurora borealis, which gleams here with uncommon splendour.

Soil.] The soil of Sweden is in general very bad, though there are particular spots to be found, which are of a superior quality. Much attention has been paid to agriculture, and the peasants are represented as exceedingly industrious; yet neither art nor science can atone for the natural deficiency of the soil, and with their utmost efforts, the Swedes are hardly able to raise a sufficiency of grain for home-consumption. The most fertile provinces of Sweden are in the northern division, or Gothland, where considerable quantities of wheat are raised. The loss of Finland has been injurious to Sweden, as the southern parts of that extensive tract are eminently fertile, and well-cultivated. The unhappy propensity of the peasants for ardent spirits, and the great consumption of grain requisite for supplying the distilleries, concur in rendering Sweden dependant on its neighbours for this necessary article of human subsistence. In Nordland and Angermannland, though good crops are produced from a soil composed of sand and clay, yet they are rendered precarious from the vicinity of the Norwegian mountains, whence mists and frosts are engendered, which often destroy the crops when nearly ripe. The soil of Swedish Lapland is generally sterile. The greater part of the country

[4] Within twenty years the thermometer of Celsius, at Stockholm, has been noticed to fall 709 times to 5° below zero, of Fahrenheit, and once so low as 40° below that point. Severe, however, as this must be, it is far exceeded in Swedish Lapland. At Tornea, on the 23d January, 1760, the thermometer stood at 7 o'clock, A. M. at 14½° below zero; at 9 o'clock, P. M. at 58°; and at midnight, at 82° below the same point. At Jukaservi, 2 degrees farther north, and half a degree to the west, the thermometer stood on the same day at 60° below zero; while at Utsjocki, 4° north of Tornea, and 3° to the east, the mercury sunk into the bowl, notwithstanding the thermometer was graduated to 147° below zero.

is covered with rocks, peats, or moss, and gravelly plains. There are a few tracts of soil tolerably good in the southern parts.

Vegetable Kingdom.] As to fruits, they are by no means plentiful in Sweden; and beyond Gefle, no fruit-trees appear. Farther north, the beech disappears; oaks become scarce; and firs, pines, junipers, and birches, are the only trees which endure the cold. Even these at a higher latitude become stunted; till the dwarf birch, the hardiest of all, disappears in the Alpine region of Lapland, a little below the line of perpetual snow. Sweden is, however, by no means deficient in forests; and excels Norway in the variety, number, and size of leafy trees, particularly in Wermeland, and the south, where are vast forests of oak, beech, elm, and other deciduous trees; but these are still less common than firs and lofty pines. Aspens, limes, pears, and poplars are only found in Schonen. The comparatively low situation of the whole tract to the south and east of Wener Lake, when contrasted with the lofty plains of Norway, is the cause of this superior abundance of leafy trees. The botany of Sweden has been ably illustrated by the learned Linnæus, the celebrated father of that science. Corn, wheat, rye, oats, barley, pease, potatoes, cabbages, turnips, flax, hemp, hops, and tobacco, are greatly cultivated in Sweden. The fir is the most common tree in this country. The vegetable productions of Lapland are not numerous, but more various than might be expected. Wahlenberg enumerates and describes 1087 species of plants in Lapland. Fruit-trees are not indigenous; but a variety of berries are spontaneously produced, namely, black currants, raspberries, crawberries, juniper berries, bilberries, and the Norwegian mulberry, which grows upon a creeping plant, and is greatly esteemed as an antiscorbutic. The most useful native vegetables are sorrel, noted for its antiscorbutic properties; *angelica arcangelica*, highly relished as an article of food; and the *lichen rangiferinous*, or reindeer lichen, the chief food of that animal during winter, and which the Laplanders frequently boil in broth for their own use.[5] Of the indigenous fruits, the most delicious is the berry of the *rubus arcticus*, which, when fully ripe, is said to be superior in fragrance and flavour to the finest strawberries. A small plateful fills an apartment with a more exquisite scent than the sweetest perfume, and it is preserved in Sweden as one of the finest sweetmeats. No agriculture is pursued in Lapland, except in a few sheltered valleys, and on the banks of the rivers in the southern districts. In some places, a plough of a peculiar construction is used in preparing the soil for the seed, on ground full of large stones; but generally the ground is dug by the labourer. The grain which grows best, and is chiefly sown in Lapland, is barley, or rather bigg; and oats have been raised on the high level of Enontekis. It is found that no grain will ripen in any district where the average heat of the three summer months does not reach to $47\frac{1}{3}$° of Fahrenheit. From the commencement of the seedtime to the end of harvest seldom more than sixty days elapse, or from the end of May to the end of July. So rapid is the growth during the summer-season in Lapland, that Acerbi affirms himself to have seen, at Enontekis, the tobacco plant increase generally more than an inch in twenty-four hours.[6]

[5] "Hi Lichene obsiti campi, quos terram damnatam diceret peregrinus, hi sunt Lapponum agri, hæc prata eorum fertilissima, adeo ut felicem se prædicet possessor provinciæ talis sterilissimæ, atque Lichene obsitæ."—*Flor. Lapp.* p. 332. *Amst.* 1737.

[6] The Finnish colonists in Lapland sow considerable quantities of turnip-seed, which frequently succeeds. The Finns have even introduced the cultivation of grain

Animals.] The Swedish zoology presents nothing remarkable. Beyond the 63d parallel, the common domestic animals of Europe cannot endure the climate, and the physical growth of man himself appears checked by the cold. Linnæus enumerates 1,400 species of organized beings in Sweden. The horses, like those of Norway, are generally small, but spirited. Those of Angermannland possess the utmost symmetry of limb and form. The cattle and sheep present nothing peculiar. The wool is pretty good, but the attempts to improve the breed have not succeeded. The rein-deer will be described under the article Norway. There are a few stags and roes, besides bears, foxes, lynxes, badgers, and lemmings. The increase of wolves throughout Sweden and Finland of late years, is one of the most remarkable events in the history of the country. The blue-throated warbler, or *motacilla svecica* of Lapland, is said to surpass the nightingale in the variety, harmony, and sweetness of its modulations and cadences. The *snow ripa* ptarmigan is very abundant in the northern districts. Several species of wild fowl which haunt the lakes are said to be peculiar to Sweden. Bees are found in the south districts. The plague of the northern districts is the swarms of flies and gadflies, which torment man and beast.

Minerals.] Sweden may be pronounced the parent country of modern mineralogy, having produced a number of illustrious names in that science; as Bergman, Cronstedt, Wallerius, Berzelius, and others. First in dignity, though not in profit, are the gold mines of Adelfors, in Smaland; but these mines are now nearly exhausted, the little they produce scarcely covering the expense. Gold also occasionally presents itself in beds of hornblende, in the mine of Basna, in the vicinity of Ryddarhytte. Native gold is also found at Swappavara, in Torneo Lapmark. Silver mines exist in several parts of Sweden; but the quantity of this metal furnished by Sweden is inferior to that produced by Norway. The annual produce of silver from the mines of Sala is about 1700 lbs. It is for her mines of copper and iron that Sweden is chiefly famed. At one time, Sweden supplied almost the whole world with iron; but English iron, though of inferior quality, is now more universally used. The superiority of the Swedish iron arises from its being prepared with charcoal, in place of coal, as in England, as well as from the natural quality of the ore, which is a pure protoxide, so nearly in the metallic state as to be highly magnetic with polarity. The chief copper mines are in Dalarn or Dalecarlia. That of Falun is probably the most ancient mine in Europe, having been worked, it is said, upwards of a thousand years. The mines of Sala and Norberg yield lead and galena; the former pure antimony, and the latter molybdena. Cobalt is found at Basma; but in the richness and profusion of this article, Sweden is much behind Norway; while, on the contrary, it much exceeds Norway in the purity of the alum yielded by the works of Andrarum, in Schonen. Sweden is deficient in salt and coal. In Schonen, indeed, a mine of the latter mineral was discovered at the close of the last century, but nowhere else have indications of it been found. Green sand has also been found in Schonen. At Elfdalen, a village in Dalecarlia, 65 miles N.N.W. of Falun, very valuable quarries of porphyry were discovered in 1786, and have been wrought, ever since that period, on the same plan as the marble quarries in Italy. This porphyry, in point

into the district of Alten, in Western Finmark, which may be considered as the most northern cultivation in the world.

of colour, is the finest that is known. Porphyry also appears in the mountain of Swukkhu.

CHAP. III.—AGRICULTURE—MANUFACTURES—COMMERCE—MONIES.

Rural Industry.] The surface of Sweden may be divided into three districts, viz. Northern, Middle, and Southern Sweden. The first of these possesses little or no agriculture,—the scanty crop of barley and rye which is reared in it hardly supplying one half of the consumption. Here the peasants are obliged to mix their meal with a flour prepared from the bark of the *pina sylvestris*, or the roots of the *cala palustris*. Potatoes are cultivated in great quantities throughout Sweden, and used as a substitute for bread. Wine is manufactured from currants and gooseberries. In the southern and northern districts, a great quantity of cattle is reared. The fisheries afford a considerable source of wealth to Sweden. The cultivation of forest-timber employs a great many hands. If we reflect on the history of Sweden for the last three centuries, and the present state of property in that country, we cannot be surprised, that manufactures, agriculture, and trade, do not flourish there. The landed property is nearly all in the hands of the nobility: the generality of whom have neither industry, patriotism, nor enterprise, sufficient to induce them to struggle with the difficulties attending the infancy of improvement. In addition to this, there is also a great deficiency of capital for such improvements. Sweden is, however, rich in some products. Its exports in timber, wrought and unwrought, pitch, and oil, are very considerable; and its mines are very valuable.

Iron Mines, Manufactures, &c.] Iron is the principal mineral of Sweden. The chief mines are at Dannemora, and consist of 12 excavations. They were discovered in 1488, and furnish that iron so much valued in Britain, which is used in the manufacture of steel, and known by the name of *Oregrund iron*, because exported from Oregrund, a port near the junction of the Bothnian Gulf and the Baltic Sea. These mines have no subterranean galleries, but are worked in the open air, like gravel-pits. The whole extent of these twelve pits, collectively, is 760 feet in length, by 500 feet in depth. The gangart of the ore, is a rich calcareous earth, containing very little sulphur, and yielding from 30 to 80, and even 90 per cent. and annually, 150,000 ship-pounds, or 60,000,000 lbs. The mines belong to thirteen proprietors, who maintain 1,579 workmen. In Wermeland and Nericia are numerous other iron mines; and the noted mountain of Taberg, in Smaaland, is one entire mass of rich iron ore, 400 feet high, and 3 British miles in circumference, and has been worked for upwards of 200 years back. Yet wondrous as this mass is, it is rivalled by a mountain near Tornea, wholly composed of iron. The fact is, that rich iron ores form the chief treasures of Lapland, but have hitherto turned to little account, as the ore must be conveyed by a land carriage of 46 English miles, with rein-deer, and in small Laplandish pulkers, and the furnaces cannot be erected near the mines for want of fuel. Even in the exportation of iron, which is here of superior quality, a considerable stagnation has taken place, in consequence of the extension of the iron works of England, where the abundance of coal, and the command of inland navigation, form more than a counterpoise to the cheap labour and

the wood fuel of Sweden. In 1815, the number of miners employed throughout the kingdom was 14,000. After iron, the other manufactures of Sweden are almost too inconsiderable to be mentioned. A little alum is exported to the harbours in the south of the Baltic, but the pottery, glass-works, silk-works, woollen manufactures, sugar-refineries, snuff and tobacco-works, are merely sufficient to meet the home-consumption. In this, as in other poor countries, it is still common for the peasantry to make at home the clothing and utensils required for their family use.

Copper Mine of Falun.] In 1650, when the produce of the Falun mine was highest, it yielded 2,500 tons, or upwards of 5,000,000 lbs. of copper. The annual average produce is now from 4000 to 5000 ship-pounds, or from 1,425,000 to 1,500,000 lbs. copper. In the year 1817, the produce was 6,090 ship-pounds, or 2,314,200 lbs. The other copper works produce 1,200 ship-pounds, or 456,000 lbs. of that metal.[7] The atmosphere of the town of Falun is almost intolerable to a stranger; and the timber of the buildings here is, in the course of a few years, found to be highly impregnated with copper.

Commerce.] Sweden, lying between two seas, is favourably situated for commerce. The Swedes are active and enterprising sailors, and conduct the greater part of their commerce themselves, besides being extensively employed in the mercantile navigation of other nations. The internal commerce is much impeded by the distance between their manufacturing towns. In general, commerce is concentrated in the metropolis, and the 23 harbours of the kingdom. The external commerce presents a real balance against Sweden. In 1816, the amount of imports was treble that of exports, so that ready money nearly disappeared from circulation. This occasioned a rigorous prohibition of almost every article of foreign produce. But the new system entirely failed in producing the beneficial effects expected to flow from it, and the result—as was to be expected—has only been to promote an importation of prohibited articles in an illegal manner: depriving the government of the benefit that might have arisen from a small duty, disseminating to a great extent the pernicious habit of smuggling, compelling the people to purchase the forbidden articles at an enhanced price, and putting the government to a great expense in supporting a coast-guard around the whole shores of the kingdom. The commerce of Sweden extended to Britain, Portugal, the Baltic, German and Mediterranean countries, the West Indies, North America and China; but of later years most of the foreign companies have been dissolved, and only one, the East India Company, which sends a couple of ships annually to China, now remains.

States Bank.] The States bank of Stockholm owes its origin to Palmshut, a private merchant of considerable property. It was instituted for

[7] The number of workmen at Falun is usually 1,200; one half of these being employed under ground as miners, the other half are at work above ground, roasting and smelting the ore, and making charcoal. The opening of the mine is extremely large, perhaps the largest in the world, being 1,200 feet in diameter, or near three-fourths of an English mile in circumference; an immense chasm, gradually enlarged to its present state by successive excavations and frequent downfalls of the superincumbent rock. The chasm is descended by several flights of wooden stairs, to the entrance of the first subterraneous gallery. The descent thence is extremely commodious; not by ladders, as is usual in mines, but by steps cut in the rock, and sloping so gently as to be practicable for the horses employed in bringing up the ore. The galleries are from six to ten feet high, and sufficiently spacious. The perpendicular depth of the mine, from the top of the chasm to the first subterranean gallery, is 1,020 feet; and from thence to the bottom, which is full of water, 720 feet more; total depth, 1,740 feet.

the double purpose of lending and exchanging money. The bank was put under the direction of the States in 1688. In a short time, the credit and the wealth of the concern increased so much, that before the conclusion of the century, the interest of loans was reduced to six per cent. and afterwards, in succession, to four and to three per cent. The interest upon borrowed money, in the meantime, fell from six per cent. to four and a half, three, and two per cent. During the reign of Adolphus Frederic, the number of notes which had been issued was very great; and the kingdom, at the same time, was so much drained of its coin, that the bank found it impossible to exchange its notes in any other way, than by copper money. To prevent a failure in 1766, the States voted a loan of £750,000. The bank is divided into two branches, or departments, called the *Laene*, or loan bank, and the *Wexel*, or exchange bank. These keep their accounts entirely separate from each other, but supply each other's wants when necessary. The loan bank issues money to individuals on mortgages or pledges. For gold and silver in block, or in the state of bullion, for copper, brass, and certificates of having lent money to the bank, the proprietors receive the full value, for which an annual interest is paid of three per cent. For iron, the proprietors receive three-fourths of its value, at the same interest. When houses or lands are mortgaged, six per cent. is paid on the sum borrowed; of this four per cent. is considered as the interest, and the remaining two per cent. is applied to the gradual reduction of the debt. Jewels, which were formerly received as pledges, are now refused, not only because the bank is liable to be imposed upon by counterfeits, but because the value of such articles is continually fluctuating. The bank of exchange issues bank-notes, and exchanges them, discounts bills, receives the money deposited, for interest or security, and discharges an interest of two per cent. on all deposites.

Monies.] Payments are made in *dollars*, *schillings*, and *stivers*; but in Sweden and Norway the value of the two latter coins is very different. In Norway a *schilling* is the lowest coin, and answers to our half-penny; a *stiver* is equal to a penny. In Sweden, *schillings* answer to our pence, and *stivers*, to our farthings. All small sums are reckoned in *stivers*, and instead of saying *e. g.* 'four schillings,' they would say, 'sixteen stivers.' A silver dollar equals eight-pence; and there are 6 in a rix-dollar note. The only gold coin is the ducat, which is equal to 2 rix-dollars. The whole amount of copper money in circulation, and which forms almost the only medium, is estimated at 500,000 rix-dollars. The paper money has only a very precarious credit. The amount in circulation in 1817 was estimated at 30,000,000 of rix-dollars.

Measures.] The Swedish ell, which is divided into 2 feet or 24 inches, is equal to $\frac{2}{3}$ of an English ell. The Swedish mile comprehends 18,000 ells, or 36,000 English feet nearly, being $10\frac{1}{2}$ to a degree.

CHAP. IV.—INHABITANTS—MANNERS AND CUSTOMS.

Swedes.] I. SWEDEN is inhabited by three nations, viz. The Swedes who form the majority of the inhabitants, and are the descendants of a Germano-celtic tribe, related to the Normans and Danes, but divided into three other tribes, viz. Swedes, Eastrogoths, and Westrogoths. Their language is a Germano-Gothic dialect, which bears considerable

resemblance to the Danish and Norwegian. The Swedes are a well-made race of men,—rather slender than corpulent. Their complexion is generally fair, with auburn hair and fine blue eyes, which particularly distinguish the women. They are vigorous and hardy, and possess many very amiable traits of character. The Swede exhibits a more than ordinary degree of earnestness in his manner, his conception is lively, and judgment keen; he is prompt to conceive, and resolute in executing his design; he is hospitable, and a lover of society,—simple in his mode fo living,—honest in all his dealings, where not sophisticated by the influence of others,—a warm lover of his country, and an enthusiastic admirer fo greatness in every department of human attainment. At the same time, there is no nation more apt to tire of its rulers than the Swedes; in few countries have more kings perished by the hand of the assassin than in Sweden, and fewer histories display a more rapid succession of internal factions and revolutions than that of this country. A love of equality seems deeply rooted in the lower classes of Sweden; and hence the perpetual opposition made by the inferior States to the nobility.

Manners and Customs.] The dress of the Swedes is considerably different from that of the other nations of Europe, and has some resemblance to that of the Spaniards several centuries ago. This dress was established by law, in 1777, and consists of a close coat, so short as to resemble a jacket; breeches of great width; a girdle and a cloak, which generally hangs from the shoulders behind, but which is so wide as to be sufficient for covering the whole body. The hat is round, and the shoes are tied with strings. In the hat is generally worn a feather; and a sword is an indispensable part of the dress of a gentleman. The general colour is black,—a colour which is worn even by the ladies, whose dress is, like that of the men, laid under legal restrictions. The form of the dress always remains unaltered; but on extraordinary occasions, the black is exchanged for white or blue, lined with red.

The food of the rich consists of all those various luxuries which wealth can almost every where procure. The Swedish gentry are said seldom to give any of those friendly dinners, at which a few select persons meet for the purpose of rational entertainment; but they have often large dinner-parties, or rather feasts, conducted with a degree of ceremony little known in the other nations of Europe. To one of these ceremonial dinners an invitation is often received two weeks before it is to take place. When the day arrives, forty or fifty people meet, of whom the greater part are strangers to each other, or at least are so little acquainted, as to be ill-qualified for entering into any friendly or improving conversation. On a sideboard are placed bread, butter, cheese, pickled salmon, and different kinds of spirituous liquors; to these all the company pay a visit, and the liquors are seldom forgotten either by the ladies or the gentlemen. The guests arrange themselves at table in due order. Three kinds of bread are placed beside the plate of each person. One resembling the oat-bread of Scotland; another is common wheaten bread; while a third is made with the washings of the vessels in sugar-houses; this gives it a sweetish taste, but does not add much to its good appearance or cleanliness. The dishes are not brought to the table in succession; they are all set down at once. No one expresses a wish to be helped to any particular dish. Each is handed round the whole table in its turn; and unless one be inclined to eat of every thing that is presented, he must patiently wait till that dish which most suits his fancy commence its

circular career. Such, however, are the friendly effects of habit, that a Swede finds himself at no loss; he takes part of every dish that is presented. The whole is mixed: "Anchovies, herrings, onions, eggs, pastry," says Acerbi, "often meet on the same plate, and are swallowed promiscuously. The sweet is associated with the sour, mustard with sugar, confectionaries with salt meat, or salt fish." Little, or rather no, wine, is drunk during dinner. When the ceremonies of eating are concluded, the whole retire to the drawing-room, and, with much formality, thank the master and mistress of the house for the elegant entertainment. Tea and coffee are immediately served. Between tea and supper, cards are the only amusement. If one be unable or unwilling to enter into the game, he may retire to a corner and fall asleep, since rational conversation is altogether out of the question.[8]

The greater part of the houses in Sweden are built of wood covered with turf; for, though stone or brick might, in many cases, easily be procured, experience has shown them that wooden houses, when reared with solidity and preserved with care, are more comfortable and more healthy than houses of stone. Besides, wood is easily procured at a very small expense. The seams of the windows, and such chinks as might admit the air, are covered with pitch, and the inside is warmed by stoves; in the management of which, the Swedes, from long practice, have become peculiarly expert. The prices of provisions in Sweden are considered, by such foreigners as visit that country, as being very reasonable; but such prices must always be estimated by the comparative plenty or scarceness of money, and its consequent value. The food of the common people consists of a kind of bread somewhat similar to the oaten bread common in Scotland; fish dried or salted, and a kind of gruel, probably not greatly different from Scottish *porridge*. Beer is plentiful, and is used in large quantities by those of all ranks.

"As in the course of this route," says Coxe, "I constantly took my repast during the day, and passed every night in the cottages, I had frequent opportunities of observing the customs, manners, and food, of the peasants. Upon entering a cottage, I usually found all the family employed in carding flax, spinning thread, and in weaving coarse linen, and sometimes cloth. The peasants are excellent contrivers, and employ the coarsest materials to some useful purpose. They twist ropes from swines' bristles, horses' manes, and bark of trees, and use eel-skins for bridles. Their food principally consists of salted flesh and fish, eggs, milk, and hard bread. At Michaelmas they usually kill their cattle, and salt them for the ensuing winter and spring. Twice in the year they bake their bread in large round cakes, which are strung upon files of sticks, and suspended close to the ceilings of the cottages. They are so hard as to be occasionally broken with a hatchet, but are not unpleasant. The peasants use beer for their

[8] The passion for card-playing seems, in Sweden, to be carried, if possible, farther than in almost any other country. If the following story, told by Acerbi, be true, it exhibits, in a striking manner, the Swedish love of gambling. "A nobleman of great rank, having waited longer than usual for his dinner, and seeing that no preparation was made for it, went down to call his servants to an account, and to examine into the reason of the delay. He found them, in imitation of their superiors, deeply engaged at cards. They excused themselves to their master, by telling him, that they were now at the most interesting point of the game; and the butler, who had the greatest stake, took the liberty of explaining the case to his excellency, who could not in conscience but approve his reasons; however, being unwilling to wait for his dinner till the game was decided, he sent the butler to lay the cloth, while he himself sat down with the other servants, and managed the interests of that individual in his absence."

common drink, and are much addicted to malt spirits. In the districts towards the western coast, and at no great distance inland, tea and coffee are not unusually found in the Swedish cottages; which are procured in great plenty, and at a cheap rate, from Gottenburg. The peasants are all well-clad in strong cloth of their own weaving. Their cottages, though built of wood, and only of one story, are comfortable and commodious. The room in which the family sleep is provided with ranges of beds in tiers—if I may so express myself—one above the other; upon the wooden testers of the beds in which the women lie, are placed others for the reception of the men, to which they ascend by means of ladders. To a person who has just quitted Germany, and been accustomed to tolerable inns, the Swedish cottages may perhaps appear miserable hovels; to me, who had been long used to places of far inferior accommodation, they seemed almost palaces. The traveller is able to procure many conveniences, and particularly a separate room from that inhabited by the family, which could seldom be obtained in the Polish and Russian villages. During my course through these two countries, a bed was a phenomenon which seldom occurred, excepting in the large towns, and even then not always completely equipped; but the poorest huts of Sweden were never deficient in this article of comfort; an evident proof that the Swedish peasants are more civilized than those of Poland and Russia. After having witnessed the slavery of the peasants in those two countries, it was a pleasing satisfaction to find myself again among freemen, in a kingdom where there is a more equal division of property; where there is no vassalage; where the lower orders enjoy a security of their persons and property; and where the advantages resulting from this right are visible to the commonest observer." Cleanliness is a universal characteristic of the Swedish poor. Even in the latitude of 68°, Von Buch found comparative opulence and comfort among the industrious Finns of Swedish Lapland. At Lower Muonionesko, he found a large village; and was ushered into a separate room, having glass windows, and served with silver spoons.

Finns.] II. The Finns once composed the second branch of the Swedish population, and had spread over all Finland. They are now found only in the Lapmarks and Hernösand as colonists, preserving their own language, which has been identified with the Hungarian. The Finns have dark coarse hair, sallow countenances, eyes extended lengthwise and half-closed, sharp chins, and elevated cheek-bones. They are notoriously of a livelier and more profligate disposition than the Swedes.[9]

Lapps.] III. The Lapps inhabiting the Lapmarks, exist partly as Nomades, supported by their herds of rein-deer, and partly as fishermen. They are related to the Finns, and speak a peculiar Finnish dialect. In 1805, there were only 5,444 Lapps in the Swedish kingdom, of whom about 1,100 have subsequently come under the government of Russia. A great resemblance is observable between the Finns and Laplanders.[10]

[9] "The Finns are to the Swedes and Lapps what the Irish are to the English and Scotch; that is to say, a nation in which the extremities of virtue and vice are singularly blended; haughty, impetuous, and arrogant, in prosperity; abject and spiritless in adversity; in all things given to excess, whether on the brighter or on the darker side: which is the real reason why it has been so often observed of the Irish, that every individual among them has two characters: and fortunate is it for those who have witnessed only a manifestation of the one which is deserving of all praise."—*Clarke*, vol. x. p. 37.

[10] "Both the Lapland and Finnish languages are pleasing to the ear, and admirably suited to poetry, owing to their plenitude of vowels. They constantly reminded us

CHAP. V.—RELIGION—LANGUAGE—LITERATURE—ESTABLISHMENTS FOR EDUCATION.

Religion.] THE Swedes have long been accounted among the most vigorous and steady supporters of the reformed faith, having adopted it with almost complete unanimity in the reign of Gustavus Vasa, and having subsequently made the most signal exertions for its maintenance in Germany. That form of it designated Lutheranism has been adopted as the national creed, and embraced by a great proportion of the Lapps likewise. Emanuel Swedenborg, famous for visions and mystical reveries, was a native of Sweden, and has still a considerable number of followers. Some other sects exist in this country, as Greeks, members of the reformed church, about 150 Jews, and a few Pietists; but they do not, upon the whole, bear a great proportion to the other inhabitants. To the Catholics, there prevails a general and decided antipathy: nor would it have been prudent, but a few years back, for a priest of that persuasion to have shown himself openly in the provincial parts of the country.

Language.] The Icelandic language is the mother of the Swedish and Danish dialects. The learned Dane, E. C. Rask, bears testimony to the extraordinary copiousness, flexibility, and force of the old Icelandic, which, in those qualities, he affirms to be superior to every modern language; and Sweden is considered to have preserved the elements of the original tongue with comparative purity, presenting at this moment, in the national dialect, one of the most musical and flexible languages in Europe.[11]

Literature.] The introduction of Christianity into Sweden, about the middle of the 12th century, mitigated the fierce and roving spirit of the descendants of the Asae; and the union of Calmar gave peace and stability to the three Scandinavian States. But the songs and traditions of the ancient Scalds were allowed to perish from the national poetry of

of the Italian; and we might cite several instances of words common to all the three. Acerbi, as an Italian, sometimes understood the expressions used by the natives of Finland. But how great is the obscurity which involves the origin of the Finnish tongue! The people who speak it have no written character: their language therefore suffers in writing. Foreigners judge of it by the manner in which it is written either by the Russians or by the Swedes; and both these nations, using their own characters, express the language of the Finns, not merely according to their peculiar notions of that pronunciation, but, what is worse, according to their peculiar method of expressing its pronunciation. Nothing can be softer, or more harmonious, than the sounds uttered by a Finland peasant, when reciting his Pater Noster. It is full of labials, nassals, open vowels, and diphthongs, and is destitute even of a singular guttural. It may be considered, therefore, as having, of all languages, the least resemblance to the Arabic, which, as spoken by the Arabs, is full of the harshest gutturals."—*Clarke*, vol. x. pp. 24, 25.

[11] Coxe assures us, that it has, in many instances, a strong similarity to Old English, or rather to the present dialect of Scotland. Nothing was more common than to hear the postillions exclaim, "Come, let us go." (*Com, let oss go.*) "Let us see." (*Let oss se.*) "Stand still." (*Stand still.*) "Hold your tongue." (*Hold din tunga.*) "Go on." (*Go an.*) A writer in the first number of the *Foreign Review*, has furnished us with a comparative list of words, exhibiting the relation subsisting between the Icelandic, English, German, and Swedish languages, from which we here insert a few specimens:—

Icelandic.	*Swedish.*	*German.*	*English.*
fraendi	fraende	freund	friend
fadir	fader	vater	father
hey	hoe	heu	hay
sitja	sitta	sitzen	sit
rida	rida	reiten	ride
renna	rinna	rinnen	run
sverja	svaera	schwoeren	swear
slippa	slippa	schluepfen	slip

Sweden; and the old classical language, as well as the magnificent mythology of the North, found their last asylum in Iceland. When the Catholic bishops, Johannes and Olaus Magnus, were expelled by Gustavus Vasa, the hero of the Reformation in Sweden, they retired to Rome, where the one published a fabulous description of Scandinavia, and the other gave to the world a still more fabulous history of his native country. The two reformers, Olaus and Laurentius Petri, were followed by Skytte, Schäffen, Loccenius, and Peringskoeld Stiernhoek, in the study of natural history and antiquities. The patriarch of Swedish poetry was Stiernhieln, who wrote a very powerful hexameter poem, entitled 'Hercules;' but it was Ulrica Eleanora who introduced the successful cultivation of poetry and the fine arts into Sweden. Under her auspices flourished Olaus Dahlin, a poet of considerable reputation; and her son, Gustavus III., himself a distinguished writer, was indefatigable in his endeavours to encourage and reward genius of every kind. He enriched his country with several valuable libraries, the fruits of his numerous warlike expeditions, and established several academies, besides liberally patronizing the two universities of Upsala and Lund. About the 14th century, Sweden seems to have had some histories, or rather chronicles. A curious work, entitled 'The Government of Kings and Chiefs,' must be referred to this period. The first book printed in Sweden is the 'Dialogus Creaturarum Moralisatus,' which bears the date, Stockholm, 1483. But it was not till the 18th century that men appeared in this country whose learned labours have rendered them deservedly illustrious in every part of the world. Strahlenberg and Hermelin may be allowed to bear the palm of geographical science with a Delisle, a D'Anville, and a Rennel. The name of Linnæus stands as high in the Natural as that of Newton in the Geometrical sciences; and to his name may be joined those of Tillas, Wallerius, Retzius, Scheele, Cronstedt, and Bergmann; the last of which names marks a new era in mineralogy. Sven, Hedin, Berzelius, and Afzelius, have distinguished themselves in medical science. Sven, Lagerbring, Botin, Hallenberg, and Lindfors, are eminent historians. Kalm, Thunberg, Sparmann, Schwaz, and Thorild, have published lively accounts of their travels in foreign countries. The philosophical doctrines of Kant and Fichte have been ably commented upon by Hoeijer and other native Swedes; but history, literature, and the fine arts, have been much more generally cultivated than the abstract sciences.[12] Within the last twenty years an extraordinary impulse has been communicated to Swedish literature. The frigid rules of the French academicians had long checked the progress of dramatic literature in Sweden; but the influence of the master-spirits of Germany has happily overcome the French school, though supported here by the poet Leopold,

[12] It must be allowed that Sweden is by no means favourably situated for the cultivation of literature. For learned men can address themselves only to a very limited portion of the community, and it seldom happens that the sale of a book is considerable enough to defray the expenses of publication, and least of all in scientific works. To these difficulties we may add, that a very serious obstacle to the diffusion of a literary spirit, arises from the want of regular mails and conveyances. In 1816, there were only 32 booksellers' shops in Sweden, and only 177 works published, 90 of which were originals, and the rest translations. In Stockholm were 9 newspapers and other journals; in Gothenburg 6; and in the rest of Sweden 20; a proportion equal to about one-fourteenth of the literature of the public press in Germany. The year 1818 was, however, more productive, the total number of books printed that year amounting to 362, of which 91 were translations; but it may be mentioned as a proof of the reward which literary merit is likely to meet with in Sweden, that the total sum paid for copy-right in that year amounted only to 372 dollars.

and of late years a host of bold and original poets have appeared; among whom we may enumerate Atterborne, Ingelgren, and Elgstroem. Tegner, the present bishop of Wexio, has written a romance said to possess extraordinary merit, and professor Franzén has been compared by his countrymen to Sir Walter Scott. Bellmann is entitled to distinction as a musical composer, and Hoerberg to still greater ability as a painter. The 'sagas' or novels of Sir Walter Scott, and other foreign works of merit, are regularly translated for the Swedish press.

University of Upsala.] The university of Upsala was founded in 1471. In its constitution and mode of education, the university of Upsala resembles partly the Scottish, and partly the English universities. The resemblance to the former, however, is much more close than to the latter. At the head is a chancellor, who must always be a person previously important by birth and office, proposed by the professors, and approved by the king. The number of professors in Upsala is twenty-two. Their salary is not less than £70, but never exceeds £100, to which may be added a small sum annually received from such students as attend private lectures. The students lodge in the town, and resort to the university only for the purpose of hearing lectures. To preserve as much order as possible, they are divided into tribes or nations, according to the different provinces to which they belong. Each tribe has an inspector and two curators, and the ordinary members are divided into seniors and juniors, of whom the former are, in some degree, intrusted with the care of the latter. The university of Upsala has, to use the English phrase, two annual terms, one commencing in February, the other in October; but a great part of the year is consumed in holydays. The university library contains upwards of 30,000 volumes, and many manuscripts. This collection was commenced by Gustavus Adolphus, who, during his numerous warlike expeditions, was careful to carry home all the books which fell in his way. Among the manuscripts, are many in Arabic, Syriac, and Coptic; but that which is reckoned the most extraordinary, is what is denominated the *Codex Argenteus*, a copy of the four gospels written in letters of silver, a circumstance from which it has derived its name.[13]

University of Lund.] Lund, or, as it is sometimes called, Lunden, one of the most antient cities of Sweden, is the seat of another university. It was established by Charles XI. in 1666. It has 15 professors, with about 45 inferior teachers and assistants, and at present about 400 students. The library contains 20,000 volumes. It has, besides, a botanical garden, an anatomical theatre, an observatory, laboratory, and a cabinet of curiosities. The celebrated Puffendorf was a professor in this university. There is no garrison in this town, and every disturbance is carefully guarded against, which could at all interfere with the regular habits so necessary for the purposes of the student. Even the appearance of players, and such like contributors to public amusements, is strictly forbidden, and, according to rule, social evening parties are not allowed to remain later together than ten o'clock.

[13] Concerning this manuscript, which all allow to be very ancient, antiquarians have formed different conjectures; but the most general seems to be that it is a copy of the Gothic translation of the gospels made by Uphilas in the fourth century. From this manuscript several editions have been printed at different times. The most valuable edition is that of Oxford. The library of Upsala has many valuable editions of the Greek and Latin classics, but few manuscripts.

Learned Societies.] Sweden has several literary societies, of which the most remarkable appear to be the Swedish academy of arts and sciences at Stockholm, and the royal society at Upsala. The academy originated in a meeting of six persons of distinguished literary talents, among whom was the well-known Linnæus. From a fund supplied by private donations, annual prizes are distributed for the encouragement of agriculture, and inland commerce. According to the newest regulations, the academy was in 1821 divided into nine classes, viz. pure mathematics, practical mathematics, physics, chemistry, and mineralogy, zoology, and botany, medicine, and surgery, political economy, and *belles lettres.* The number of acting members, who are employed in these departments, are collectively 102. Queen Ulrica Eleanora founded the royal academy of *Belles Lettres* in 1753, which has also given birth to a long series of printed transactions; and Gustavus III., in 1786, established the celebrated 'College of the Eighteen' for the improvement of the national language, poetry, and eloquence. The royal society of Upsala was instituted in 1720, and is said to be the most ancient society of that kind in the north of Europe. It was commenced by Bonzalius, at that time librarian to the university, afterwards bishop of Upsala.

Schools.] Of elementary schools, the number in Sweden is by no means inconsiderable; education, at least the primary or fundamental part, being, as in Scotland and Switzerland, generally diffused. Government disburses, for the universities and schools of every description, in the shape of salaries, allowances to the poorer students, purchase of books, &c. about £60,000 annually. Private teaching is as currently adopted among the middling and higher classes in Sweden as in France. From the elementary or parish schools, which are very thinly scattered in the north, boys are removed to more dignified seminaries, or *gymnasia,* of which the kingdom contains twelve, being one in each bishopric, and where they are instructed in the Latin, Greek, and Hebrew languages, and in other departments of learning. Thence, if they are destined for literary pursuits, or for any of the learned professions, they proceed to the university. An attempt has been made to introduce the Lancasterian system into Sweden; and Sunday and free schools exist in many of the principal towns. There are two schools for navigation in Stockholm and Carlscrona; a military academy at Carlsberg; and several other particular institutions.

CHAP. VI.—GOVERNMENT—REVENUE—ARMY, AND NAVY.

Fundamental Laws.] THE constitution of the 7th June, 1809, and the order of succession declared on the 18th of December in the same year, by which all the laws promulgated since the death of Charles XII. were abolished, are now the fundamental laws of the Swedish kingdom. The act of union of the two kingdoms of Sweden and Norway may also be considered as a fundamental law.

By the new constitution, Sweden was declared to be a limited hereditary kingdom, at the head of which stands the king, with extensive but defined prerogatives, and in which the States have an important voice. Norway must be considered as a distinct kingdom, united under the same crown with Sweden. Perhaps, notwithstanding the apparent independence of the king, Sweden is at this moment one of the most truly

limited monarchies in Europe. The king can only enter into treaties and alliances with foreign powers, after having communicated with the minister of state and chancellor. An extraordinary council of state must be convened and consulted before the king can constitutionally declare war or peace; but he may, after taking this step, act upon his own responsibility. The king is at the head of the army and navy; but can only transact the business of this department, in presence of inferior officers, who are authorized to answer and advise him. He can make no encroachment on the personal liberty or the property of his subject, without a formal intervention of the law; he is also bound to protect his subjects in the free exercise of religion, in so far as not disturbing the public peace. The last appeal lies to the king; he can soften the rigour of the law, and return lands and goods forfeited to the crown. Foreigners are only eligible to a few military offices; the civil offices are exclusively filled by native Protestant Swedes. The king names one of three candidates proposed to him, to the bishoprics and archbishoprics. The higher and lower judges can only be dismissed by a regular judgment. The king has the power of creating nobles, restricting the title to the eldest son and heir. All royal ordonances must be signed by the speaker of the council, who, if he should conceive the will of the king opposed to the constitution, is authorized to report the same to the council of state, and resign his office, until the States have examined into the matter, and approved of his conduct. The succession is hereditary in the dynasty of Bernadotte, it runs in the male line, according to primogeniture, to the exclusion of female descendants. In the event of the failure or forfeiture of the royal line, the States have the power of nominating a successor to the Crown. No prince of the royal family can marry without the consent of the king; and in the event of his marrying a subject, or a foreign female of private rank, he forfeits his right to the throne. The king is of age at 20; and must be of the pure Augsburg confession as adopted by the assembly at Upsala in 1593. In case of minority, the council of state assumes the regency. The king's civil list is fixed at 320,000 dollars, and that of the crown prince at 100,000. The court establishment is small. The title of the king is *N. N. by the grace of God, king of Sweden, Norway, the Goths, Wendes, &c.* The royal arms consist of three golden fields—in an azure field for Sweden; a red lion, in a golden field, for the kingdom of the Goths; and a golden lion, with a silver halbert, on a red field, for Norway.[14]

[14] The following are the orders of knighthood existing in Sweden: 1st, The order of the *seraphim*, or of the blue riband; which admits only of 24 members, in which number, however, are not included the royal family, and foreign princes. 2d, The order of the *sword* or the yellow riband; which consists of three orders, commanders of the great cross, wearing a riband over the shoulder, and a star upon the coat; commanders, who, without a star, wear the riband in the same manner; and the knights, who wear a small cross at a button-hole. The number of each class of commanders is 24, that of knights is indefinite, but generally amounts to 1000. 3d, The order of the *polar star*, or black riband consisting of two classes; commanders who wear the great cross hanging from the neck; and knights wearing a small cross at a button-hole. The number of the former is 24; of the latter, exclusive of foreigners, 48. This order was formerly often bestowed on men of literary talents. 4th, The order of *Vasa*, or the green riband, consisting of three classes; commanders of the great cross, who wear a riband over the left shoulder, and a star upon the coat; commanders, who, without a star, wear a riband in the same manner; and knights, who wear a riband over the neck. This order is now bestowed on men of literary characters, or on such as have distinguished themselves in any of the sciences, or of the useful arts. Of these orders, the three first were instituted by Frederic I. in 1748, the last at the coronation of Gustavus III. An order of civil merit was founded by Charles XIII.

The Diet.] The Diet, which bears a resemblance to the British parliament, consists of four orders, the nobles, the clergy, the peasants, and the burghers. The nobles are by far too numerous for so thinly peopled a country,—a title of nobility conferring rank on a whole family, the head of which has a seat in the diet as its representative, as soon as he has reached the age of 24. The clergy are represented by the archbishop of Upsala, the 12 bishops of the kingdom, and deputies from the inferior clergy, among whom the teachers of the public schools are included; the peasants, by delegates from that body; and the burghers by deputies from the royal free town. Stockholm sends 10 deputies, Gothenburg and several others 3, and the smaller towns one deputy. To be eligible as a representative of the peasantry, it is necessary to belong to a family permanently employed in agriculture, and either to hold land from the Crown during life, or to possess a portion of land in perpetuity. The expenses of the deputies of the clergy, the peasantry, and the towns, are all defrayed by their constituents; and it is optional with each *harad* or district, and every town, to depute its special representative, or to join with one or more towns, and choose a representative for them all. The proposition of a new law is not here, as in France and the Netherlands, confined to the ministers of the Crown; but, as in the British parliament, any member may bring in a bill for such an object. Each order deliberates separately, and the decision, as in Britain, requires only a simple majority; and a bill agreed to by three out of the four orders, becomes a law by receiving the royal assent. The Diet must be assembled once every five years,—the king having the power to convoke an extraordinary Diet. It continues its sittings for three months, and the members enjoy privileges in speech similar to those acknowledged in the British parliament. The number of deputies is 1117 from the nobility; 50 or 80 from the clergy; from 100 to 200 from the citizens; and above 100 from the peasants. The decisions of the Diet, however, being taken by classes, the preponderating influence of the nobility is obviated. The nation imposes its own taxes, by means of its representatives assembled in Diet, without whose consent no taxes can be imposed except those on the import and export of grain. The king cannot grant any monopoly, or mortgage the Crown demesnes. On the assembly of every new Diet, the States elect 12 members from each class, who form a Jury Court, with power to determine whether since the last assembly of the diet, any of the higher officers of justice have forfeited the public confidence by want of skill or partiality; and upon their report, the king dismisses the peccant judge. The new constitution established a committee for superintending the liberty of the press; but the chancellor engrosses nearly the whole power in this respect, so that Sweden can hardly be said to enjoy the invaluable possession of a free press.

Administration.] The executive administration of Sweden is equally complicated with the legislative. The king is, as in Britain, at the head of the whole; and each department has its board or commission. The council of State—which is in fact a check upon the king, though professedly bearing the character of the king's adviser—consists of only 9 members, viz. the Minister of Justice, of Foreign Affairs, 6 councillors, and a chancellor; since the Union of Norway, there has been added a Minister for Norwegian affairs, and 2 councillors. Besides these, the several Secretaries of State have a voice in the council. The business for this council is prepared by a commission of 8 members. The royal chancery has in

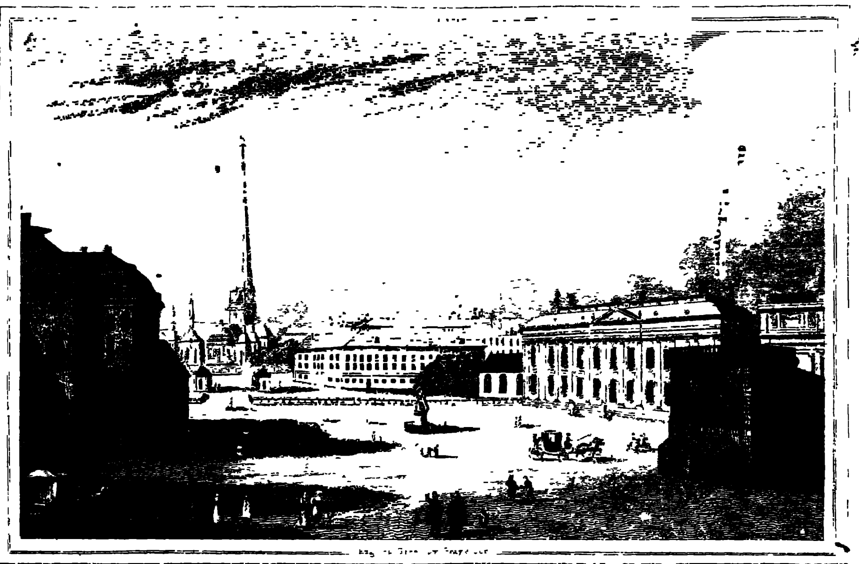
one division the home, in another the foreign affairs. The treasury is managed by a chamber or exchequer; trade is superintended by a council, the mines by a board called a college. The army and navy have, in like manner, their respective heads; while, in the administration of justice, the highest court is called the Royal Tribunal, having subordinate to it two courts of appeal. The lower jurisdictions are the *landshofdinger* or governors in each province. There are separate jurisdictions for the military, the clergy, the physicians, the servants of the crown, and the inhabitants of particular towns. The territorial divisions of the kingdom are, first, *laens;* next the *fogderies* or bailiwics; thirdly, the *harads* or smaller districts; and, finally, the parishes or *sokens*.

The ecclesiastical division of Sweden consists of 12 bishoprics, 170 deaneries, and 2,214 parishes, with 1,049 ministers, all of whom are well provided for. There is one protestant nunnery in Sweden for the unmarried daughters of the nobility.

National Code.] Sweden has its own national code of civil and criminal law, originally collected in 1442 by king Christopher; and revised in 1734 by the Diet. The citation of foreign law is expressly prohibited.

Revenue.] The revenue of Sweden is derived from various sources,—the rent of the royal domains, a portion of the great tithes, duties on imports and exports, a tax on spirituous liquors, and one of more questionable policy, on mines, forges, and chimneys, along with a poll-tax, and a few old monopolies. The amount of the whole is about one million sterling, and seldom equals the expenditure. The national debt in 1819 amounted to 6,371,862 dollars.

Army.] The military force of this country has at no time been so large as might have been supposed, from the brilliancy of its achievements. The troops which crossed the Baltic along with Gustavus Adolphus, did not exceed 10,000 men; and though they subsequently received re-enforcements from Sweden, the chief part of his army were Germans. A progressive increase took place toward the close of the 16th century; but even in the splendid exploits of Charles XII. a large proportion of his military followers were foreigners, supported at the expense of the conquered territories. In the reign of Gustavus III. the Swedish army was larger; and in 1808, a British subsidy of £1,200,000 a-year, carried it to 50,000 regulars, and a reserve of 30,000. At present, it is on a peace establishment, but on a scale sufficiently large for the limited means of the country; the corps of the army being one of engineers, 3 regiments of artillery, 7 of cavalry, and 28 of infantry. This forms the regular army; but there is also a national force or militia, for the levy and support of which, the whole country is divided into petty districts, called *hemmans*, each of which is bound to furnish a soldier, and a spot of land for his maintenance. This land the soldier in time of peace cultivates himself, being pledged to attend at exercise only a specified number of days in each year; when permanently absent, the inhabitants of the district are bound to cultivate it for him: the officers are supported in the same manner; the colonel by a property placed in the centre of his regiment; the captain by a less extensive lot in the centre of his company, and so on the down to the corporal. When in the field, these troops receive the same pay as the rest of the army, but at other times the expense on them is limited to clothing, which is furnished by the districts. The total amount of the Swedish army was, in 1817, 41,000 men, of whom, the regular



troops amounted to 10,531. There is an hospital for invalids, and an academy for military sciences; several founderies, and a few fortified places.

Navy.] The Swedish navy formerly consisted of about 30 ships of the line, about half that number of frigates; and several smaller vessels; and it has on many occasions distinguished itself by actions of singular bravery. Since the naval power of England, however, began to assume its present colossal magnitude, the maritime power of Sweden, in common with that of most of the European States, has been on the decline, and is said now to consist of little more than half the former number of ships. Many gallies have been built, which, in the shallow Baltic, have been found to be more serviceable than vessels of greater force. The number of registered seamen has been computed at 18,000: of these only a few are engaged in actual service, and receive pay in money. The greater part are distributed upon different parts of the coast; and, like the national troops, have certain portions of land allotted for their maintenance.

CHAP. VII.—DIVISIONS—MIDDLE SWEDEN.

Sweden may be divided into three parts, viz. Northern, Southern, and Middle Sweden. The ancient divisions were into Gothland, Lapland, Norland, and Sweden Proper. Middle Sweden is divided into eight laens.

1st, 2d, 3d. Stockholm, &c.] The province of Stockholm, in which the three laens of Stockholm city and country, and Drottningholm, are included, is a flat district, abounding in chasms and cliffs, and deeply indented with bays. Its climate is not so mild as that of Schonen; the soil is fertile, and agriculture is successfully pursued.

The capital of Sweden is situated at the junction of the lake Mälar, with an inlet of the Baltic. The form of the town is an irregular oblong, extending from N. to S. while the waters cross it in two channels from E. to W. The situation is extremely picturesque, as well from the mixture of land and water, as from the unevenness of the ground, which is heaved in some places into huge and abrupt rocks of gneiss and granite, and in others is beautifully rounded into softly swelling eminences.[15]

[15] Clarke remarks, that the approach to this city has nothing in it that affords the smallest idea of the vicinity of a metropolis. His companion Bloomfield gives the following vivid account of the first impressions which Stockholm excites on a stranger's mind:—" Barkarby was the last stage before we arrived at Stockholm, and only ten English miles distant. The approach to the metropolis of a kingdom, through which we had travelled for a week without encountering one being who appeared civilized, one place which could remind us of the character of an ingenious and intelligent people, was the source of considerable curiosity. As we drew nearer, the country became more romantic, and yet not the less cultivated, in parts where cultivation was possible. The Mælar made its appearance more frequently; and lofty rocks, covered with pine, interrupted the straight course of our road. There were, however, no symptoms of that luxury and wealth which, in the neighbourhood of a metropolis, decorate the country around with villas, seats, and lodges; and convert the real enjoyments of rural retirement into the frippery and affectation of town rurality. As in other districts through which we had passed, a solitary cabin stood on the edge of a forest; a village spire enlivened the deep green of the firs; and a cart occasionally proved the existence of something like traffic. Within two miles, as we had calculated, of Stockholm, a long fence, and a gravel-walk here and there in a wood, gave tokens of a country-seat in the English taste. This we afterwards learnt was the royal seat of the Haga. Whilst we were wondering at our miscalculation of the distance of the long-expected Stockholm, we were stopped at a wooden building, and an ill-dressed man demanded to search our boxes. We delivered up our keys, and, to our extreme astonishment, found that this was the entrance to the renowned city of Charles the Twelfth. Beyond was a narrow street—if street it might be called—formed by red wooden pales on the

Nothing can surpass the view from the buildings on the higher grounds; public edifices, churches, and spires; vessels lying at anchor, or with white sails, spread to the wind, sailing along the capacious channels, all rise in mingled prospect; while the lake, studded with islands, some bare and craggy, others adorned with trees, gardens, and villas, melting blue into the distant horizon, or sinking below the shadow of the cloud-capped mountains, terminates the view. The city is generally described as standing upon seven islands, but it would be more correct to limit the number to three, viz. one large island to the southward, called Sodermalm, a small one in the centre, another somewhat larger to the north-west, and a track on the mainland to the north, called Norrmalm. The smaller islands, or rather islets, contain only forts or buildings for naval purposes. The central island constituted the original city, and is still the most busy part of the town, its quays being bordered by a stately row of buildings, the residences of the principal merchants. It contains the palace and other public buildings; but the houses being high, and the streets narrow, its appearance is somewhat gloomy. The number of bridges, great and small, in this capital, is 13. The houses in the central part of the town are built either of stone or of brick, covered with plaster. Their foundations are on piles, and their height is seldom less than four or five stories; but in the suburbs few of them are more than two stories, many of them only one, and generally constructed of wood. The principal public edifices are the royal palace, the palace or house of assembling of the nobles during the sitting of the diet, the bank, the mint, and the exchange, &c. &c. The royal palace, or castle, is a quadrangular structure, with a square or court in the middle. Its situation is elevated, its dimensions of great magnitude, and the style of architecture such as to rank it with the finest palaces in Europe. The lower part of the walls

one side, and a row of red wooden houses on the other. Trees in regular disposition, of the height of ten feet, the circumference of whose branches might be about four feet, shaded on one side the long avenue before us. As we proceeded, houses of plaster enlivened the long-continued red hue of the buildings, and here and there a broken window varied the uniformity. In a short time, the grand street called, by way of eminence, *Droettnings Gatan*, or Queen-street, burst upon us. The difference between this street and those seen at Gothenburg was nothing: the same regularity of the facades, the same appearance of poverty and want of cleanliness, characterized them both. The houses were lofty; the windows flat, and even with the walls, opening like casements; no shop-windows exposing to view the goods within; no appearance of trade; no crowd in the streets. An awkward carriage or two, like an old-fashioned English whiskey on four wheels, conveyed a few ill-dressed females to pay their morning visits. Foot-passengers, in default of foot-pavement, were hurrying in all directions, to avoid the unbending course of the coachman; and military men, in huge round hats, towered above the rest, with feathers of portentous size. Such was our entrance into Stockholm! For about three quarters of a mile, the same sort of view was presented. On a sudden the scene changed, and we found ourselves in a spacious square surrounded on all sides by buildings of a most magnificent description. On our right rose, above a large and rapid stream, a superb pile of architecture, connected with the square by a broad bridge of granite, and commanding at one view the innumerable buildings, streets, and avenues below it. In the centre of the square stood an equestrian colossal statue of bronze, upon a pedestal of polished granite. On each side, lofty palaces corresponded to each other; and between these and the first vast building, the winding of the lake admitted an extensive view of the city, rising like an amphitheatre, and the rocks still farther in the distance. The whole *coup-d'œil* was enchantment. Nothing we had ever read or seen could give an idea of the singular magnificence of such a prospect. . . . . . We proceeded over the bridge, and passed at the foot of the palace. On turning to the right, the view of innumerable shipping, and a fine broad quay, increased our admiration. On the opposite side of the water, lofty houses rose one above another; the dome of a church above them, seeming to look down upon the water and city below. It is impossible to describe the effect of the whole, at first sight:—the most romantic country imaginable, surrounding a populous city, rising amidst rocks and forests."

is of polished granite, the upper part brick, but with a covering of stucco, which gives it the appearance of stone. The roof, like that of a number of public buildings in Sweden, is of copper; and the interior is elegantly ornamented. The churches are substantial, and in some cases elegant buildings, generally with lofty spires; but it would be difficult to point out any one of them particularly remarkable for size, architecture, or decorations. At a short distance from the royal palace, on one of the quays, stands a fine statue of Gustavus III. cast in bronze, and raised on a pedestal of polished porphyry. This city has likewise an arsenal, situated in a pleasing promenade, called the king's garden, and two theatres. Stockholm is the mercantile emporium of the central part of Sweden, the place to which its products are brought for export, and where the greater part of the imports from abroad are deposited. Few harbours have greater depth or capacity; for a thousand sail of shipping may lie here in safety, and the largest of them may come close to the quays. A number of islands and detached rocks, however, render the entrance not without danger, and the navigation of a winding channel of twenty miles in length must often be attended with considerable delay. By this means, however, Stockholm, like London, enjoys all the benefits of a sea-port, without being exposed to an attack by sea, or incurring alarms similar to those so severely experienced in the present age, by its rival Copenhagen. The number of vessels that enter the harbour annually is averaged at 1000. The manufactures of Stockholm, though not on a large scale, are pretty numerous, comprising iron-founderies, glass-works, sugar-refineries; also, leather, cotton, hats, stockings, silk, watches, clocks, mathematical instruments, and jewellery. Population 78,000.

4th. Upsala.] There is nothing to particularize in the features of the laen of Upsala. The whole district is level, and is generally considered one of the most fertile provinces of Sweden. The capital, Upsala, whose university has already been spoken of, is accounted the second city of Sweden, not on account of its present importance, but because of its formerly being the residence of the court. It is situated on an extensive plain, upon the small stream Fyrisa, by which it is divided into two almost equal parts. In the centre is a square or area, from which the principal streets extend in straight lines, so that it has the appearance of greater regularity than is common in the cities of the north. The greater part of the houses are of wood painted red, a mode of building very common in Sweden. Several of the houses are of brick covered with stucco. The roofs are generally of turf. Upsala, as it was formerly the royal residence, contained a palace, begun in 1549, by Gustavus Vasa, and almost totally destroyed by fire in 1702: part of what remains has been converted into a prison; and the magnificent hall, in which the Diet of Sweden formerly met, and of which the length is 140 feet, and the breadth 90 feet, now serves the purpose of a granary. The cathedral, which was begun in the 13th century, is the finest ecclesiastical structure in all Sweden. It is a brick building, for the most part in the Gothic style of architecture; but with some late additions in the Doric order, which, instead of beautifying the structure, has disfigured it by the conjunction of incongruous objects. This cathedral contains the tomb of the celebrated Gustavus Vasa, with several relics of an historical, as well as of a religious kind; but none which is more deserving of notice than the tomb of Linnæus. "A simple entablature of stone," says Dr. Clarke, "now covers the mouldering reliques of this illustrious man. With what emotions of sacred enthu-

siasm will future generations approach the hallowed spot which has afforded a sepulchre to his remains! How powerful in its effect upon the heart, will ever be the simple inscription which marks the place where he lies—*Ossa Caroli A. Linné!* Who will read these words unmoved, or wish to read more? For of the title that has been added (*Equ. Aur.*), every letter is superfluous." Upsala is the see of an archbishop, and contains, exclusive of the students, about 5000 inhabitants.[16] About four miles from this town is the celebrated *Mora* field, in which appear the *Mora* stones, marking the spot where the kings of Sweden used to be solemnly crowned in ancient times.[17]

5th. Westerås.] In the laen of Westerås, there are 27 mines, of which six are in full operation. There is also a very celebrated mine at Sala. The town of Arboga carries on a brisk commerce by means of its canal of the same name.

6th. Nyköping.] The laen of Nyköping possesses many beautiful points of scenery. Its capital contains a population of 2,500 souls.

7th. Oerebro.] Oerebro laen is quite an inland district. The climate is cold and rough; but, upon the whole, favourable to agricultural operations. It is inhabited by a race of peasantry, who preserve many of the traits and customs of their forefathers. The town of Oerebro contains nearly 3,400 inhabitants, and carries on an extensive iron trade. It is situate at the western extremity of the lake Hielmar, called in the Swedish language, *Hegelmaren*, and consists of one street, almost a mile in length. Several of the better houses, and almost all the others, are covered with turf, which grows to such height, that it appears fit for mowing, and presents the extraordinary sight of sloping meadows sheltering the inhabitants of a whole town beneath their verdure.[18]

8th. Carlstadt.] The town of Carlstadt, in the laen of the same name, contains 2,300 inhabitants. It is regular and well-built.

CHAP. VIII.—SOUTHERN SWEDEN.

Gothenburg.] Southern Sweden is divided into fourteen laens. The laen of Goteborg, or Gothenburg, is a cold inhospitable district. One of the branches of industry of the poorer classes here, is to collect the *Lichen Tartareus* with which the mountains are covered, and which is exported in great quantities to Great Britain where it is used for dyeing.

The town of Göteborg, or as it is more generally called, Gothenburg, is situated at the mouth of the river Goeta, without the Sound, and in real importance is much more considerable than Upsala. It was founded by Charles IX. in 1604, and without ever having been the residence of any Court, or any arbitrary measures having been used to procure its increase in magnitude, has attained its present size by its advantageous situation, and the commercial privileges which have been bestowed upon

[16] The ancient name of Upsala was *Arosia*, or *Oestra Araes*, to distinguish it from *Westeras*, or *Western Arosia*. In all the older chronicles and descriptions of Sweden, it appears under its original name.

[17] About 85 miles from Upsala are the celebrated iron mines of Danmora.

[18] "The towns of Oerebro, Arboga, Koeping, Westeros, and Eukqeping, are all exactly alike; they consist each of one long street, with timber dwellings, or log-houses, roofed with turf. Before laying on the turf, they place the bark of young birch trees, in the form of scales or plates, one over the other, like weather tiles, which carry off the water, even if it should penetrate the turf-coating. This sort of roofing is very durable: with very little repair, it will last as long as the house itself."—*Clarke*.

it. "Göteburg," says Coxe, "is in a very singular situation. At a small distance from the sea is a marshy plain, scarcely more than half-a-mile in breadth, watered by the rivers Goeta and Moldal, and almost entirely enclosed with high ridges of rocks, so bare and rugged that they scarcely produce a single blade of grass, and exhibit as barren an appearance as the summits of the loftiest Alps. Göteburg stands partly upon the ridges, and partly in the plain; and is divided from these different situations, into the Upper and Lower Town. The latter is entirely level, intersected by several canals, in the manner of the Dutch towns; and its houses are all constructed upon piles: the upper part hangs on the declivities; and rows of buildings rise one above the other like the seats of an amphitheatre. The whole is regularly fortified; and its circumference is near three miles, exclusive of the suburbs, called Haga, which lie towards the harbour. The streets are all uniformly straight; a few of the houses are of brick; but the generality are constructed with wood painted red. The harbour is formed by two chains of rocks, and is about a quarter of a mile in breadth." This description is still pretty accurate, only that the fortifications have lately been demolished. The only public edifices of Gothenburg are the Exchange, the extensive buildings belonging to the East India Company, an hospital, and a magnificent church built since 1812, with stones brought from Scotland. The principal manufacturing establishments are of coarse linen and woollen stuffs, leather, sail-cloth, ropes, some silk and cotton goods, soap, tobacco, and sugar-refining. Its mercantile transactions are very considerable, extending to America and the Indies; and the principal merchants are Scotsmen. Iron and steel, furnished by the rich mines of Warmeland, form the principal articles of export, and, after these, linen, timber, tar, fish-oil, and alum. Clarke states, that herrings equal to two million barrels have sometimes been caught here in a single season. They are either dried in smoke, or consumed in making oil. Fifteen barrels of herrings yield one barrel of oil—it requires above 4000 barrels of herrings to keep the works going one day. The number of vessels belonging to the port is upwards of 250; that of vessels of all nations that annually enter it, about 1000. It is the see of a bishop, the seat of a chamber of manufactures, and of various courts of justice. The English language is pretty generally spoken here. Its extraordinary prosperity, indeed, between 1808 and 1813, was principally owing to its becoming the great depot for British manufactures, which thence found their way into the continent, as well as of Baltic produce, which was exported in return, to Britain and her dependencies. The population was estimated in 1818 at 21,058, and does not appear to have increased since.

10*th. Elfsberg.*] Elfsberg laen comprehends the ancient Gothic province of *Dalfland.* It is intersected by the Scandinavian chain. The soil is fertile, and the inhabitants, like all the Westrogoths, are a handsome race. The principal town is Wenersburg, with a population of 1500 souls.

11*th. Skaraborg.*] Skaraborg laen is a good agricultural district. Its capital Mariestad, upon the Wener, contains 1,100 inhabitants: Falköping, a small town in this laen, is celebrated as the scene of a great battle in 1388, in which the Semiramis of the North took king Albrecht and his son prisoner.

12*th. Linköping.*] Linköping laen embraces the whole province of Ostrogothland. It is a fine romantic country, in which agriculture is successfully carried on. But the principal source of revenue is the fine old forests which occupy almost one-seventh part of the province. The largest

town in this district is Narkoeping[19] upon the Motaler, one of the principal commercial towns of the kingdom. Its population is said to exceed 9,000.

13*th*. *Calmar*.] Calmar laen is a maritime province, composed of the eastern part of Smaeland and the island of Oeland. The town is of a small size, being scarcely a mile in circumference. It is built upon an island in the Baltic, which is joined to the continent by a bridge. It is fortified, and is said to be a place of considerable strength. The streets are regular, and the number of houses, when the town was visited by Coxe, was 450. The castle, which was formerly the residence of the celebrated Margaret, stands about half-a-mile from the town, and has been converted into a distillery. Calmar has still a considerable timber-trade, although its present commerce is but the shadow of what it possessed during the middle ages.

Oeland.] The island of Oeland, is a long, narrow, and almost barren island, 70 miles in length, and in general about 6 in breadth. Its area is about 300 square miles. A small stripe along the coast is under tillage, but the greater part is only fit for pasturage; of course the inhabitants, about 6000 in number, are compelled to seek their subsistence, in a great measure, from the sea. Fish and butter they export to the mainland, as also freestone, black marble, and a little alum. Oeland has some large forests, which abound in deer, hares, and wild boars. The chief town is Borkholm, founded in 1816. The Oelanders are a strong and vigorous people. An Oeland hut, which Dr Clarke visited, gave him an opportunity of seeing a little of the interior economy of these humble dwellings. "A more curious sight could hardly be imagined. At our entrance nobody was up. The members of the family held a conversation with our boatmen, but we saw none of them. The floor of the only room they had, and of which we had taken possession, was covered with straw and sedge, according to the custom of the country at Christmas, and once a practice, even in kings' houses, in England. Peeping from behind their hiding-places, as soon as they perceived that strangers had entered this apartment, they were all stirring; and presently there fell out from every side of the room the naked figures of men, women, boys, and girls, who had been piled in tiers one above another, as in a ship's cabin; being concealed from view by so many sheep-skins, which were suspended as curtains before their cots. This motley group, amounting in all to thirteen persons, without a rag to cover them, squatted themselves upon the floor in the middle of the chamber, and began all together the business of their brief toilette. The women put on two pairs of woollen hose, and over these a pair of greasy boots. The toilette being ended, they all with one accord began to blow their noses into the palms of their hands, and to wipe them upon their clothes. Then the men kindled their tobacco-pipes; and a universal hawking and spitting commenced. Nor were the women unoccupied; for a large fire being lighted, the females of the family quietly took up their petticoats, and sat before it, very leisurely gartering their stockings. This being done, a girl now handed round their breakfast; it consisted of, first, a dram to each person, served in a small silver cup; secondly, a portion of black biscuit, with about two ounces of fresh

[19] Several towns have the same termination in Köping, signifying merely the places where the market is held.

butter. At this meal they sat without ceremony or order, each where and with whom he pleased, chatting and laughing in groups, apparently contented and happy. It was rather new, to see mothers with children at their breasts disengage their tender infants from the nipple, to pour down their little throats a portion of the dram which came to the mother's share; but still more remarkable to see these young dram-drinkers lick their lips, roll their eyes about, and stretch out their puny hands, as craving more; showing how accustomed they were to this beverage. Perhaps the practice may explain the frequency of dwarfs in the northern countries of Europe; as in Poland, Russia, and Sweden. But the author, venturing a mild remonstrance upon seeing an affectionate mother pouring brandy down her child's throat, was told, 'It is good for them, our children are not troubled with wind or with rickets; and our adults,' giving one of the sturdy peasants a notable thump, 'see how hardy and healthy they are!' There was no reply to such an appeal; for of the Oelanders, in general, it may be said, that a more vigorous race can hardly be found; and all of them have imbibed with their milk their morning-drams of brandy. It is in scenes like that which the interior of this hut exhibited, the mind is forcibly struck with a conviction of the relative nature of human happiness; that it belongs to no rank or situation in life as a peculiar possession; but that in all stations, gifted with health, and virtue, and just government, Providence has vouchsafed an equal portion of this blessing."

14*th*. *Joenkoeping*.] Joenkoeping laen is a very mountainous district. Its capital, of the same name, contains 3000 inhabitants.

15*th*. *Kronoberg*.] Kronoberg laen contains the town of Wexioe, with 1,200 inhabitants.

16*th*. *Karlscrona*.] Karlscrona laen contains the important town of the same name, which is built upon five islands in the Baltic connected by bridges. Karlscrona is one of the most considerable ports of Sweden. It was founded by Charles IX. from whom it derives its name, but it is indebted for its present rank to Charles XI. who endowed it in 1680, with a number of valuable privileges. Since his time, it has been the principal and almost the only depot of the Swedish navy. The buildings are, for the most part, of wood, some are of brick, and a few of the churches are said to exhibit no inelegant appearance. The entrance into the harbour, which, on account of shoals, is naturally difficult, is rendered still more so, by two strong forts, one upon each side. Towards the land, the suburbs are defended by a wall of stone. The Swedish admiralty, which had once its seat here, was removed to Stockholm in 1776. Its exports consist of timber, tar, potash, tallow, and marble. The number of inhabitants, according to Coxe, was 18,000; it is stated by Balbi, in 1826, at only 11,000.

17*th*. *Gothland*.] Gothland, or Wisby laen, is situated on the S. E. coast of Sweden, and forms, along with some very small islands that surround it, a province, having a superficial extent of 766 square miles. It is hilly on the coast, but level in the interior, and has a favourable climate, and a tolerably fertile soil. Here are extensive and valuable woods of oak and pine. Its mineral productions are chalk and sandstone, the latter of which is wrought to a considerable extent, and exported to Stockholm. The fisheries on the reefy coast are productive, and prosecuted with great activity. The number of inhabitants is 23,000. Wisby, the capital, contains 3,900 souls.

18*th. Halmstadt.*] Halmstadt laen, comprehending the former province of Halland, is an ill-cultivated district. Its capital contains about 2000 inhabitants.

19*th. Christianstadt.*] Christianstadt, embracing the northern and eastern part of Schonen, is a mountainous district, but pretty well cultivated. Its capital of the same name contains 3,100 inhabitants.

20*th. Malmoehus.*] Malmoehus laen comprehending the remainder of Schonen, exhibits a finer vegetation than any other part of Sweden. The walnut is cultivated here, and even grapes are sometimes brought to maturity in favourable situations. This district might furnish a much greater quantity of corn that it does at present, if the phlegmatic and obstinate character of its peasantry could be overcome. The whole district of Schonen exhibits features peculiar to itself. The population is a strong but phlegmatic race of men, approaching more to the Danes in character than the rest of the population of Sweden. Malmoe, the principal town, is built on the Lund, exactly opposite Copenhagen. It contains about 5000 inhabitants; and possesses some commerce, though the harbour is bad. Ystad, another town in this laen, and one of the principal commercial towns of Sweden, contains nearly 3000 inhabitants. From this place, the mails usually cross to Stralsund. The town of Lund contains 3,300 inhabitants. It was on the *Lybershill* in the neighbourhood of this town, that the kings of Schonen were elected in ancient times. Landskrona contains nearly 4000 inhabitants. Not far from this town is the island of Hven, situated in the Sound, remarkable as having been the residence of the great Tycho Brahé. Helsingborg, at the entrance of the Sound, contains 1,500 inhabitants. The greensand of Schonen may be considered as the termination of the great tertiary series of rocks which extends from Germany under the waters of the Baltic, until it terminates in the higher lying parts of Schonen.

CHAP. IX.—NORTHERN SWEDEN.

THIS division embraces the whole northern part of Sweden, anciently designated by the name Norland, with that part of the Lapmarks which still belongs to Sweden, and the province of Dalarne. The total extent of Northern Sweden is equal to two-thirds of the whole kingdom; but excepting that this territory presents an impenetrable barrier to invasion from the Russian side, its possession is of little or no value to Sweden. It is divided into four laens.

21*st. Falun.*] Falun, or Stora Kopparberg, comprehends the former Dalarne. This laen is a mountainous district. From the high Kioelen run to the eastward three chains of mountains, between which lie large valleys. These mountains are partly granite, partly gneiss; and are covered, for a great part of the year, with snow and ice, while the lower parts are covered with impenetrable woods. The inhabited parts are the valleys, which offer a variegated scenery of hills, lakes, and streams. The climate is severe; and the hopes of harvest are often destroyed by the frost of a single night. The principal productions of this province are metals, minerals, wood, potash, pitch, and tar. The Dalecarlians are a tall, handsome race. A high large forehead, deep dark blue eyes, a high nose and projecting cheek-bones, with thin sharp lips, and a large chin form the usual physiognomy of the Dalecarlian. This people have

always distinguished themselves in the history of Sweden, by their patriotism and independent spirit. Their dialect approaches very nearly to the old German; but in the S. E. melts into the Swedish. Clarke says that the old provincial poetry of Dalecarlia—which is becoming unintelligible to the Swedes themselves—is so like the language of our early English ballads, that his party found little difficulty in making out its meaning.[20] Their manners are simple; and, like our quakers, they address all ranks by the singular pronoun *thou*. Like the Italians and Swiss, they are in the habit of travelling to a distance from home as pedlars; but seldom fail to return to the land of their birth-place with the little savings they have earned during their exile. In his journey through Dalecarlia, Dr Clarke observed the similarity between the ceremonies of a wedding celebrated by the inhabitants of that province, and the manners of the ancient Greeks; and hence has contended that both were descendants of one common stock. The town of Falun has a population of 4,700 souls. The great copper mine is situated to the W. of the town. A curious punishment is here inflicted on miners who have been guilty of misconduct; they are placed on an enormous wooden image of a horse, elevated 12 or 15 feet from the ground. The same mode of punishment is adopted at Stockholm for common misdemeanours. Mora, situated upon the lake of Siljan, contains 6,000 inhabitants. Near to the village of Raettwick, is the celebrated cataract of Stigfors.

22*d. Gefleborg.*] Gefleborg laen—the ancient *Gestritia*—is mountainous, and abounds in lakes; the scenery around which equals that of our own Westmoreland and Cumberland. About one-fiftieth only of this district is under cultivation; the rest consists of woods, lakes, and marshes. A vast number of cattle is reared here, and a great quantity of butter and cheese manufactured. Gefleborg, the capital, in latitude 60° 42′—the *Gevalia* of the Latin descriptions of Sweden—contains about 10,000 inhabitants. Its church is a handsome building; and, like all the ecclesiastical structures in the north of Sweden, surprises the traveller by its grandeur.[21] It is one of the best towns bordering on the Gulf of Bothnia, and employs 60 or 70 vessels in foreign commerce. Soederhamn, one of the principal commercial towns of this district, is situated upon the Soedrafiærden, and possesses a population of 2000

[20] Holenius, of Fahlun, in the 'Dissertationes Academicæ of Upsal,' published a brief Vocabulary of the Dalarne dialect, showing its relationship to the Gothic, Icelandic, Danish, Saxon, Teutonic, Vandalic, German, English, Greek, Spanish, Italian, Anglo-Saxon, Franco-Theotisc, and Mœso-Gothic. See the Section entitled 'De Linguâ Dalekarlorum hodiernâ,' in the Second Part of his Thesis 'De Dalekarlia,' printed at Upsal, p. 139.—Many other instances might be adduced, more striking to an English ear than those which he has mentioned; but among them are the following:—

Dalarne.		*Icelandic.*	*English.*
Bradda	*Jentaculum apponere*	Braud	Bread
Gron	*Seges*	Grion	Grain
Hetta	*Capitis tegmen*	Hattur	Hat
Ig	*Ego*	Eg	I
Knaif	*Culter*	Knijffur	Knife
Lyr	*Hepar*	Lyr	Liver
Miog	*Multum*	Miog	Much
Miok	*Lac*	Mioolk	Milk
Salti	*Sol*	Salt	Salt
Ura.	*Auris*	Eyra	Ear

[21] "These edifices are all built by the peasants, among whom a great degree of emulation has been politically excited; the inhabitants of the different parishes endeavouring to outvie their neighbours in the stateliness, size, and beauty of their churches."—*Clarke*, vol. ix pp. 228.

souls. A considerable quantity of linen and fire-arms is manufactured here. The two iron mines of Penning and Still are rich in ore.

23d. Jemptland.] Jemptland laen is intersected by five large chains of mountains, over which the traveller is conducted by narrow and dangerous roads. The rearing of cattle is the principal employment of the inhabitants. This district includes the territory of the *Herjeædalers*, a distinct people, than whom a more athletic race of men, or better provided with the necessaries of life, perhaps does not exist. The Lapps occupy some parts of the province. The capital, Œstersund, was founded in 1786. It is a very small place.

24th. Western Norland.] The two provinces of Angermannland and Medelpad, are included in Western Norland, which is a beautiful, picturesque, and fertile country. The farmers of Angermannland are all yeomen, who cultivate their own estates, and will suffer no powerful lord, or monopolizing autocrat, to reside among them. The capital of this province is Hernoesand, situated on the Island of Hernsoen, with a population of about 2000 inhabitants. The harbour is one of the best in the north of Sweden, and a very rich commerce is conducted here. In this town there is a press for works in the Lapponian language. The harbour of Sundswall is of easy access, and is, in every respect, better suited for trade than the Swedish metropolis. "A person, possessing a small capital," says Clarke, "with the smallest degree of commercial knowledge, might soon double it here." The same traveller assures us, that the scenery south of this place is the finest in Europe.

25th and 26th. Western and Northern Botten.] The two laens of Western and Northern Botten comprehend the most northern districts of Sweden, viz. the ancient province of Western Botten, and—with the exception of the Lapmarks of Jemptland—the whole Lapmarks belonging to Sweden. This is wholly a mountainous district. On the Norwegian limits, the hills assume a terrific and sublime appearance, the snow-line commencing at the elevation of 3,600 feet, and the greater part of the inferior regions presenting one desolate sterile rock. In the eastern districts, the mountains assume a less rugged appearance; yet, even here, the peculiarly wild features of the North are imprinted on the face of creation. Interminable heaths, unfathomable marshes, enormous lakes, headlong cataracts, rugged and abrupt precipices, are every where seen.[22] The principal rivers are the Umeae, the Sildut, and the Torneae. None

[22] "The groves," says Dr Clarke, "by the side of the Torneae, are delightful: a rude and devious path, always doubtful and often altogether indistinct, overshadowed by foliage impenetrable to the rays of the sun, now winding among rocks, now along the brink of a cataract, conducted us

O'er many a wilder sweeter sod
Than Fancy's feet have ever trod.

In these woods, when removed from the noise of the cataracts, there is sometimes a stillness which is quite awful; it is the unbroken silence of Nature left entirely to herself: if it be interrupted, it is only so by the humming of the mosquitos, or the piping of the becassine, or the murmur of the wind. Man seems to be an intruder, for the first time, into the midst of solitudes that have never been trodden by any human foot: the very path which he pursues has not been traced by the footsteps of men, but of animals." Similar feelings were excited in Alfieri's mind by the scenery of Sweden. "Were I to choose a northern residence," says that poet, who visited Scandinavia in 1770, "I should prefer Sweden before any that I know. I was transported by the wild majesty of the boundless forests, its lakes and precipices, and, though I had not then read Ossian, many of his images were awakened within me, as I afterwards found on perusing him." In another place, the same Italian talks of a 'certain inexpressible silence' which reigns in the atmosphere of Sweden, and which makes one think himself beyond the boundaries of earth.

of these rivers are navigable, and all of them are, for eight months of the year, covered with ice. The climate is severe. For six weeks of the year, the country is veiled in the darkness of one uninterrupted night. But, as if to recompense the inhabitants of these regions for such a privation, the sun,

> ——— 'As he nearly dips his flaming orb,
> Wheels up again, and re-ascends the sky,'

and, in some parts, remains above the horizon for six weeks. The heat of summer is also as excessive in degree, as the cold of winter. Rye and barley ripen in 66 days, and the growth of all vegetation is equally rapid. The plague of this country are the clouds of gnats which darken the air in summer. The species of plants indigenous to this region do not exceed 800, among which the most numerous are of the cryptogamous species. The only domestic animals of the Lapps are rein-deer and dogs. The rivers abound in excellent fish, and a variety of wild animals exist in the country. The Western Bottens are a fine looking race of men, of mild and hospitable manners, and high spirit. Their ordinary language is the Swedish. The Lapps do not perhaps exceed 10,000. They are divided into districts of families, over each of which a chief magistrate, called a *Lapplansman*, with two assistants, presides. If parties are not satisfied with his judgment, an appeal lies to the ordinary courts of the kingdom. The annual amount of taxes paid by this simple people does not exceed 600 dollars. Umeae, the capital of Lappmark, is situated upon the river of the same name, and has a population of above 1000 souls. The town of Piteae has nearly the same number of inhabitants. We have already said that all the Lappmark territory, on the east of the Torneae, belongs to Russia.

Authorities.] Whitelocke's Journal of the Embassy to Sweden in 1653–4.—Marshall's Travels, 1773.—Coxe's Travels.—Eric Tuneld, Geographie öfver Konungariket Sverige, författed af Gjörwel. Stockh. 1785—1792. 4 vols.—Tableau de la Suede, par M. Catteau. Lausanne, 1790, 2 vols. 8vo.—Acerbi's Travels through Sweden, Finland and Lapland, in 1798 and 1799.—Dan. Djurberg, Beskrifning om Svea Rike. Stockh. 1806.—Consett's Tour.—Boisgelin's Travels, 1810.—B. Nyerup Rejser til Stockhom i Aarene, 1810, og 1812, etc. Kiobenh. 1816, 8vo. —Dr. Thomson's Travels, in 1812, 8vo.—Carte Generale et Physique du Royaume de Suede. Par.—Karta öfver Sverige, etc. af C. Akrell. Stock. 1811.

NORWAY.

Name, Boundaries, and Extent.] NORWAY, or as it is called by the people of the country, *Norge*, or *Norryke*, that is, 'the Northern kingdom,' or 'kingdom of the Normans,' comprehends the western, but smaller part, of the Scandinavian peninsula. It is bounded on the N. by the Northern Ocean: on the N. E. by Russia; on the E. by Sweden; on the S. by the Cattegat; and on the W. and N. W. by the German Ocean. The breadth of this country is various, being greatest in the parallel of Bergen, where it is 240 miles; N. of the parallel of Drontheim it grows very narrow, in some places not exceeding 60 English miles. In several

parts of Finmark, however, it exceeds 150 miles. Including the windings, and the coast stretching E. from Cape Naze to Stromstadt, Norway presents a shore of more than 2,000 British miles in extent. In the N. this country is separated by mountains and rivers from its only foreign neighbour, and on the E. Nature has erected a mighty barrier between it and the sister country.[23] Its superficies is 151,171 square miles.

CHAP. I.—HISTORY—PHYSICAL FEATURES—CLIMATE, SOIL, AND PRODUCTIONS.

History.] Harold Harfager, or the fair-haired king of Norway, appears in history so early as 870, spreading terror and desolation throughout the Hebrides. This prince laid the foundation of that authority which the kings of Norway, and afterwards of Denmark, when the monarchies were united, exerted over the Orkneys. Olaf I., called Olaus Friguessan by some historians, having been converted to Christianity in England, compelled his Norwegian subjects to embrace it. Olaf II. continued the work begun by his predecessors, and made use of religion as a pretext for wresting the government from a few petty kings who then ruled along with him in this country. Canute the Great, king of Denmark, conquered Norway in 1028, but did not retain it long.[24] In 1263, Haco, king of Norway, was defeated by Alexander III., king of Scot-

[23] The boundaries between Sweden and Norway were, and, perhaps, still are, the most exactly determined of any in the world; having been drawn with the utmost accuracy, even through the most desert and inaccessible wildernesses. For a length of 1196 British miles, it was every where determined to an inch. The march-stones rested on firm plates, in which the point of commencement was accurately pointed out. Above this, the whole had the form of uncemented stones, three ells high and nine round. On the top of all these were five particular stones; one in the middle with the king of Denmark's name on the Norwegian, and the king of Sweden's name on the Swedish side. Two lines cut out on the under part of the stone, pointed out the direction in which the next march-stone was to be found. Two other stones, called *directors*, were situated on the continuation of these lines, some feet from the middle stone, to point out the direction of the boundary line. Two other stones, the *witnesses*, surrounded the middle stone on other sides, that its place might be still more accurately ascertained, if any accident should remove the stone from its proper place. Between the march-stones, the wood was every where cut through for a breadth of 16 ells, so that the one march-stone might be seen from the other. These were seldom more than four English miles from one another. In every parish touched by the boundary was deposited a very accurate description and plan of the proceedings of the commissioners of the two governments, together with a very minute description of the boundary, so far as it was connected with that *Praestigelt*, or parish. These documents were signed by all the Danish and Swedish commissioners, who were present at fixing the boundaries; and were carefully deposited in the churches. This very clear and definite boundary line, was fixed in October, 1751; and it was besides agreed, that the limits should be reinvestigated every 10 years, the march-stones kept in order, and the woods again cut. These limits were actually gone over anew and improved, in 1786 and 1806; in their whole extent, from Swinesund, at Stromstadt, to the eastern extremity of the lake Enare, on the frontier of Russian Lapland. It must be observed, however, that, since the peace of Fredericksham, in September, 1809, Eastern and Western Finmark are now entirely bounded on the S. by Russian Lapmark, from the source of the Muoniojock, the eastern branch of the Torneae River, to the old frontier at the lake Enare: all this tract of Swedish Lapmark, being ceded to Russia by that treaty.

[24] Adam, canon of Bremen, who wrote a treatise, '*De situ Daniæ et reliquarum Septentrionalium Regionum*,' about the year 1080, speaking of Norway and Sweden, calls them "two widely-extended kingdoms of the North, hitherto almost unknown." The same historian gravely relates, that, "to the eastward of Sweden, where it borders on the Riphean mountains, there are vast deserts and mountains of snow, where are herds of monstrous men, which shut out all approach; also Amazons, Baboons, and Cyclops, having but one eye in the middle of their foreheads: Hemantopedes, skipping or leaping with one foot only. Man-eaters without speech!"

land, in the famous battle of Largs, in Ayrshire. From 1034, Norway was governed by its own king; and when, in 1319, the male-line of the royal house was extinguished in Haco VII., the States elected the young Swedish king, Magnus VIII., the son of Haco's daughter. Olaf IV., the grandson of Magnus, was elected king of Denmark in 1376, and, after the death of his father, governed both countries. This prince, having died without issue, was succeeded by his mother, Margaret, daughter of Valdemar III., king of Denmark; and, from this period, Norway remained united with Denmark, but preserving, with a few exceptions, its own constitution. The union of these two kingdoms lasted till 1814, when, as related in our historical sketch of Sweden, the King of Denmark, in his quality of absolute sovereign of Norway, ceded this State to his Majesty the King of Sweden, on the 14th January, 1814, to be thenceforth united to the kingdom of Sweden.

Physical Features.] The coast of Norway is high, bold, rugged, and deeply indented, especially in the northern parts, with arms of the sea running deeply into the mainland, and surrounded by a multitude of small *shares*, which within the polar circle expand into large islands. The coast is remarkably deficient in good harbours. though possessing in many instances a great depth of water; and it is remarkable that banks of sea-shells have been found here sometimes 200 feet above the present elevation of the sea. The interior is generally mountainous, interspersed here and there with romantic glens and fertile valleys, especially in the southern parts. It is intersected by many rivers full of cataracts, creeks, and inlets of the sea, together with numerous large and small lakes, which, bordered with woods of deciduous trees, of variegated foliage, and forests of tall and stately pines and firs, afford altogether most romantic scenery; to which, however, the preponderance of naked rocks and barren mountains gives rather the appearance of grandeur than of beauty. Marshes and fens occupy large districts of this country, and nowhere in Europe are found such a number of precipices, cataracts, and glaciers, as exist here.

Mountains.] The Norwegian mountains form a grand and extensive chain, running nearly 1,200 British miles, in a N. N. E. and E. direction, terminating at Tanafiord, and occasionally detaching lateral ridges from the main chain. They commence near the southern extremity of Norway, and are denominated by different appellations as they advance in their course.[5] The most southern part of the chain is generally known by the appellation *Severberget*. The Dovrefieldt forms, in the Sneebätta, the highest part of the chain, from which a branch strikes off in a S. E. direction, forming the frontier between Sweden and Norway. North of this the great Norwegian range is composed of mica slate and granite, and denominated the *Kioelen* mountains; it gradually declines in elevation as it runs to the N. E. and E., separating Swedish Lapland from Norland and Finmark, and terminating at Tanafiord, beyond which there are no traces of this chain.

Upon the authority of Bishop Pontoppidan, these mountains were believed to exceed the Alps in elevation, which is now known to be false. The highest mountain of the whole range, the Sneehaetta, was scaled by

[5] In the language of Norway, *aas* means a long but low ridge of mountains; *kulien*, an isolated top of a mountain; *ruden*, a round mountain of small projection; *egg*, a sharp ridge; *hammer*, a rocky headland; *bakke*, a small hill; *moe*, a small sand-hill; *tind*, the peak of a mountain; *find*, *brae*, or *jokul*, an ice-mountain; *fieldt*, a high ridge of mountains.

Esmark, in 1800, and found to be not more than 8,115 English feet high, or little more than half the height of Mont Blanc. It is composed of mica slate. The highest passes of the Norwegian mountains are those of Fillefieldt, between Bergen and Aggershuusstift, 3,973 feet, Harebacken and Jerken, over the Dovrefieldt, not far from Sneehaetta, 4,575, and 4,563 feet, respectively: an inconsiderable height when compared with those of the Alps and Pyrenees.[26]

Glaciers.] In several places of the Sneehaetta, where the rays of the sun fall obliquely, the snow-line is at an elevation of 3000 feet; but in exposures where the rays have full force, the snow melts even as high as 7000 feet, during the heats of summer. There are glaciers in these mountains, but none comparable for magnitude to those of the Alps. Amongst the Kiölen mountains, the ordinary site of the glaciers, between the latitudes of 67° and 68°, may be placed at 2,325 feet of elevation. These seem to owe their formation to the alternate influence of thaw and frost in changing gradually the lower zone of snow into an icy wall. The beautiful and fantastic groups often presented by these glaciers, are, by the simple northern tribes, ascribed to the invisible powers of magic. Hence they are called *jegna* in Lapland, and *jokul* in Iceland and Norway, from the Gothic verb *gyckia*, which signifies, to trick or bewitch the eye. As the glaciers, from their low position on the mountains, are in a state of perpetual though gradual decrease, the melted water that flows from under them, washes down quantities of mud and small gravel, which sometimes accumulating near the border of the ice, form a soft ridge, or mound, of various heights, from one fathom to six, or even ten fathoms. Such collections of stony fragments, which, in Switzerland, receive the name of *moraines*, are called *jokulsgarde*, or glacier-earths, in Iceland. But where the sides of the mountain are steeper, the weight of the glacier at last overcomes its cohesion; it then cracks, separates, and precipitates itself with a tremendous crash into the subjacent valley. This kind of accident is, in the higher parts of Norway, called *jokul's-brackin.*

Rivers.] Of the numerous streams that descend from the Norwegian mountains, none are navigable, and all of them are inconsiderable, except the Glommen. This river, called also the Storelf, or Great River, rises from the Lake Oesting; and, after a meridional course of near 300 British miles, enters the sea at Friederickstadt. Notwithstanding its magnitude, which is equal to that of the Thames at Putney, it is unnavigable by reason of cataracts in some places, and shoals in others. The only purpose to which it is applied, is that of floating trees from the interior forests to the coast; about 50,000 being annually, at an average, brought down the stream in this manner. The Drammenelf, after having received the Beinna, flows into the west side of Christiana Bay. The Altenelf and Tanaelf are the largest streams in Finmark. The Altenelf is, how-

[26] In the narrow pass of Kringelen, leading over the mountains from the coast into the interior, and from thence to Sweden, is a wooden cross erected to commemorate the catastrophe of Colonel Sinclair, and a regiment of 900 Scotch, who, in the summer of 1612, were surprised, and "dashed to pieces like potsherds," by a handful of Norwegian peasants. This officer in the service of the great Gustavus, had been despatched by him to recruit in Scotland; and finding, on his return, the Swedish coast blockaded by a Danish fleet, was compelled to land on the western coast of Norway; whence he advanced into the country, crossed the great chain of the Dovrefieldt, and had nearly traversed the entire breadth of that kingdom, when he was suddenly overwhelmed by the sturdy mountaineers. Only 60 of the whole regiment were spared, and these afterwards fell victims to the untamed ferocity of their conquerors.

ever, unnavigable; as in its course through the mountains, below Masi, it dashes over perpetual falls the whole way, and the mountains rise like perpendicular walls above the river, reducing it at last to a mere fissure, so that it is not navigable 15 miles above Alten. The Tana is celebrated for its vast shoals of salmon.

Lakes.] The lakes of Norway are numerous, and several of them are of considerable size: as the Mioesen, 60 miles in length, 18 broad in the centre, and contracting towards the extremities: it contains a fertile island of 10 miles in circumference. The Rund-Sion, 50 miles long, but only 2 miles broad; and the Tyer, 15 miles in length and breadth. The lake of Faemund, near the source of the Glommen, 35 miles long, by 8 broad. What was formerly called Danish Lapland, abounds in lakes, as the Zolmihjauri, Zgarajauri, Jissjauri, Abyjauri, Jediekjauri, Gurjajauri, and others too numerous to mention, and too unimportant to describe. In several of these lakes are found floating islands or *mardynes*, composed of pieces of turf or sea-grass, originally torn from their situation by the water, and afterwards matted together by the action of the currents.

Seas.] The branches of the sea, which indent the coasts of Norway, are so numerous, that a bare enumeration of them would be tedious. It is somewhat remarkable, however, that among these numerous inlets, scarcely any good harbour is to be found. Off the coast of Nordland is the whirlpool of Maelstrom, the dangers and wonders of which have been much exaggerated by the credulous Pontoppidan. This whirlpool, so much magnified, except in bad weather is fearlessly approached by boats, and is seldom dangerous to ships.[27]

The North Cape.] The principal promontories are Lindesnaes on the S. W.; the Stat on the W.; and Cape North and the Northkyn on the N. Acerbi thus eloquently describes the feelings with which he surveyed the scenery of the North Cape at midnight: "Here every thing is solitary, every thing is sterile, every thing sad and despondent. The shadowy forest no longer adorns the brow of the mountain. The singing of the birds—which enlivened even the woods of Lapland—is no longer

[27] This phenomenon is situated between two islands, belonging to a group called the Loffoden islands, between Drontheim and the North Cape. "I had occasion," says an American writer, "some years since, to navigate a ship from the North Cape to Drontheim, nearly all the way between the islands or rocks and the main. On inquiring of my Norwegian pilot about the practicability of running near the whirlpool, he told me that with a good breeze it could be appreached near enough for examination without danger, and I at once determined to satisfy myself. We began to near it about 10 A. M. in the month of September, with a fine leading wind, N. W. Two good seamen were placed at the helm, the mate on the quarter-deck, all hands at their station for working ship, and the pilot standing on the bowsprit, between the night-heads. I went on the main-topsail yard with a good glass. I had been seated but a few moments, when my ship entered the dish of the whirlpool; the velocity of the water altered her course three points towards the centre, although she was going eight knots through the water. This alarmed me extremely for a moment. I thought that destruction was inevitable. She, however, answered her helm sweetly, and we run along the edge, the waves foaming round us in every form while she was dancing gaily over them. The sensations I experienced are difficult to describe. Imagine to yourselves an immense circle running round, of a diameter of one and a half miles, the velocity increasing as it approximated towards the centre, and gradually changing its dark blue colour to white—foaming, tumbling, rushing, to its vortex; very much concave, as much so as the water in a tunnel when half run out; the noise, too, hissing, roaring, dashing—all pressing on the mind at once, presented the most awful, grand, solemn sight, I ever experienced. We were near it about 18 minutes, and in sight of it two hours. It is evidently a subterranean passage. From its magnitude, I should not doubt that instant destruction would be the fate of a dozen of our largest ships, were they drawn in at the same moment. The pilot says that several vessels have been sucked down, and that whales have also been destroyed. The first I think probable enough, but I rather doubt the latter."

heard in the scene of desolation. The ruggedness of the dark grey rock is not covered by a single shrub. The only music is the hoarse murmurings of the waves, ever and anon renewing their assaults on the huge masses that oppose them. The northern sun, creeping at midnight, at the distance of five diameters along the horizon, and the unmeasurable ocean in apparent contact with the skies, form the grand outlines of the sublime picture presented to the astonished spectator. The incessant cares and pursuits of anxious mortals are recollected as a dream; the various forms and energies of animated nature are forgotten; the earth is contemplated only in its elements, and as constituting a part of the solar system."

Climate.] Two-thirds of Norway are situated within the temperate zone, the other third is situated within the polar circle. But, from its maritime situation, Norway is not so cold as might be expected from its high latitudes. In the interior, it is much colder in winter than on the coast, the atmosphere being less humid; but the temperature of the summer months is below that of Swedish Lapland. This is especially the case in Finmark, where, though the mean temperature at the North Cape is 6 degrees higher than at Enontekis, yet the mean temperature of the summer months, at the latter place, is much higher than at the former. On the southern edge of Norway the longest day is 18 hours 30 minutes, and the shortest 5 hours 30 minutes. In the middle districts, the longest day is 21 hours, and the shortest 3 hours. In the extreme north the sun continues above the horizon for two months and a half; and remains invisible for an equal period. Norway can hardly be said to possess a spring or autumn. The summer's heat instantly succeeds the cold of winter. Within the space of seven days, Nature throws off her snowy covering, and assumes the garb and hues of spring. "The contrast between the rudeness of winter and the bloom of spring," says Geijer, "is here much more powerful, and, consequently, the latter is here welcomed with a far higher feeling than in those countries, whose inhabitants know nothing of such quick transition: as if the warm look of maternal love were more delightful to that child, above whom it seldom beams. The spring, which quickens all beings, seems in the North, more than elsewhere, to stir the very heart of Nature; and presents, particularly in the mountainous parts, where the transition is more rapid, a spectacle which should pervade the darkest and most depressed bosom with a ray of the delightful bliss of existence. The snow melting in the sunbeams, and rushing from the mountains in numberless rivulets over the fragrant verdure of the vales,—the mighty waters, loosened from their icy chains, and hastening onward with augmented tide,—the trees, as it were, instantaneously arrayed in leafy verdure, from which the song-birds chirp their tuneful strains, filling the clear elastic air of spring with salutations to the North,—the heaven floating in a brilliant sea, which soon no longer knows of night,—the gladness, in fine, pervading the whole of animated nature,—all combine in the northern spring, to cause an overflowing sense of life, as at once awakened from a lengthened torpor. If this first transition make a more powerful impression on the observer, the mildly blooming progress immediately succeeding it, has a more genuine and moving charm. From its contrast with the frequently barren grandeur of northern scenery, and from its tinge of evanescent beauty, all the loveliness of nature in the North has a sort of tender expression. This observation applies equally to the gentle tints of the opening rose, and to

the blooming cheek of the northern maiden; to the clear colouring of the heaven, when compared with a dark blue southern sky; to the light but vivid verdure of the grass, so strongly contrasting with the unaltered witnesses of winter,—our woods of gloomy pine, all which evince a weakness of vegetation not to be found in the maturity of southern nature, and its—we may so say—more full blooded productions."[28] However, it is thought that of late years a sensible change has taken place in the climate of Norway; the summer being less warm, and the winter less severe. Beyond the 66th parallel vegetation nearly disappears, although the Norwegians contrive to raise corn at Altengaard, under the 70th parallel. This is the highest known latitude in which corn has ever been raised.

Vegetation Line.] Connected with the climate and latitude, is the line of vegetation. Fruit-trees, of various kinds, flourish at an elevation of 1000 feet; the spruce-fir can stand the cold at an elevation of 2000 feet; the silver fir at a height of 3000 feet, as also the birch; beyond this the dwarf birch, some willows, and the juniper, alone vegetate to the elevation of 3,290 feet above the sea. Barley and oats vegetate at an elevation of from 1,500 to 1,800 feet, when sheltered in valleys; but at 1,200 or 1,300 feet of altitude, the night frosts are highly prejudicial to the seed.[29]

[28] "Thus," adds the professor in a somewhat more fantastic strain, "the beauty of the North almost invariably resembles a delicate and tender child, whose gentle, innocent loveliness, even in the cradle, seems to supplicate deliverance from the cruel fate by which it shortly must be doomed to perish; and the striking contrast between rudeness and gentleness, liveliness and torpor, perceptible in the northern regions, makes itself felt in the brightest bloom of spring. These and many other distinctive qualities, which pervade our being either pleasingly or painfully, seem, on that very account, in these regions, to draw the compassionate attention of man to nature, and to create a closer relation to it, and to its mysteries. To this cause may also be attributed that peculiarly deep and comprehensive perception of nature, which forms a fundamental principle in distinguished northern minds; a tendency which, even in the earliest mythology and poetry of the North, expresses itself by dusky images and tones, and in later times, purified by cultivation, has been principally developed in sciences and art."

[29] Von Buch gives us the following curious description of the decreasing line of vegetation, in ascending the Kiolen mountains: "It is extremely entertaining to describe great and rapidly ascending heights in this climate. As in the ascent of Mont Blanc, we gradually rise beyond all the points which seemed immeasurable from the valley, so in like manner the Lapland vegetation, with which we are familiar in the valleys, gradually disappears under our feet. The Scotch fir soon leaves us; then the birches become shrivelled; now they wholly disappear, and between the bushes of mountain willows and dwarf birches, the innumerable clusters of berry-bearing shrubs have room to spread, blaeberries on the dry heights, and mountain brambles on the marshy grounds. We at last rise above them; the blaeberries no longer bear; they appear singly, with few leaves, and no longer in a bushy form. At last they disappear, and they are soon followed by the mountain willows. The dwarf birch alone braves the height and the cold, but at last it also yields, before reaching the limit of perpetual snow; and there is a broad border before reaching this limit, on which, besides mosses, a few plants only subsist with great difficulty. Even the rein-deer moss, which vies in the woods with the blaeberry in luxuriance of growth, is very unfrequent on such heights. On the top of the mountains, which is almost a table-land, there is no ice, it is true, nor glaciers, but the snow never leaves these heights; and a few single points and spots above this level are alone clear of snow for a few weeks. Here the Laplanders seldom or never come with their rein-deer, except in descending to the valleys. It is a melancholy prospect; nothing in life is to be seen any longer, except, perhaps, occasionally an eagle in his flight over the mountains, from one fiord to another. The view is more grateful as we descend, as it is a return from wilderness and solitude, to cultivation and society. On Akkha Solkhi, one of these mountains on the western coast, and 3,392 feet in altitude above the sea, the following limits of the different productions were accurately marked by the barometer.

	English Feet.
Limit of snow, above Talvig, in 70° N. Lat.	3,514
Betula nana, or dwarf birch.	2,742

Agriculture.] In Norway the soil is often so shallow as not to admit of being ploughed; and the number of inhabitants is too small to admit of its being cultivated in any other way. Vegetation, however, is amazingly quick: corn, we are informed, is sometimes sown and reaped within six or seven weeks. The nature of the climate requires this speedy growth. The summer is short, and autumn, such as it is, generally brings with it such a quantity of rain as almost completely destroys whatever crops may be on the ground. To dry the grain—which generally consists of rye—a contrivance has been made, which might be adopted in countries where similar seasons are common. "The peasants," says Coxe, "fix forked poles, about ten feet high, and place rows of other poles transversely, on which they file the sheaves, the lowermost sheaf hanging about two feet from the ground. They are also obliged to bake the corn in wooden shades, heated by means of stoves." Around Christiana, we find apples, pears, cherries, and even apricots, growing in the open air.

Forests.] The forests of Norway are immense, and constitute the true wealth of the country, occupying above 500 saw-mills. The produce of these forests, consisting of ash, birch, oak, and lime-tree, is applied to various purposes. The large trees are formed into beams, planks, and spars, for exportation. The more diminutive trees and branches, and even larger pieces of timber, in the interior, where carriage is expensive, are made into charcoal for the use of glass-houses, furnaces, and different kinds of manufactures. The roads in Norway, as in many parts of Russia, are formed of wood. Turpentine is extracted from the fir-trees in great quantities, and affords a valuable article for exportation. Fences in this country, as in America, where timber likewise abounds, are formed of split-wood; hedges being scarcely known. The forests afford the Norwegians abundance of fuel, so that though the country may contain coal, it is seldom, or rather never sought after. The Norwegians even make manure of their trees, by burning them, and strewing the ground with the ashes. Nothing can be more destructive of the timber than this practice; it being necessary to burn a great number of trees in order to procure a small quantity of ashes. The Norwegians, like the Americans, have learned to apply particular parts of some of their trees to beneficial purposes. The inner bark of the elm, a tree said not to be common in Norway, and of the fir, which abounds, is dried, ground, and used not only for the feeding of swine—a use to which it seems to be well adapted—but, in times of scarcity, when mingled with meal, is used even as human food. The outward bark of the birch is used to cover the roofs of houses, because, from its sap and firmness, it resists putrefaction longer than almost any other substance. The inner bark of the birch serves a variety of purposes. It is used in the tanning of hides, and for strengthening fishing nets and sails. This tree, from an incision made in the trunk near the bottom, also yields a liquor resembling wine. The twigs serve, in times of scarcity, as fodder for horses; the twigs of alder and aspen are used for the same purpose.

Rein-deer.] The same benevolence of nature which has given the

	English Feet.
Salix myrsinites, or whortle leafed willow, ...	2,150
Salix lanata, or downy willow, goes higher; it rises above the *betula nana*, and approaches near to the limit of perpetual snow.	
Vaccinium myrtillus, or blaeberry, ...	2,031
Betula alba, or birch tree, ...	1,579
Scotch fir, or *pinus sylvestris*, ...	450

camel to the parched deserts of Africa and Asia, has bestowed on Lapland the rein-deer, an animal no less calculated to live in extreme cold, and to walk on snow, than the former is fitted to dwell in heat, and to tread on the burning sand. The rein-deer is about the size of a buck; his colour is whitish; his horns, which are cylindrical, and palmated at the top, are large and branching. Two of the branches hang over the face, and remarkably distinguish this animal from every other of the deer kind. The females, as well as the males, have horns. This animal, which subsists where cattle of every description would perish, in a great measure compensates for their want. To the Laplander he affords milk, from which is made cheese of a good quality. In winter, he transports the sledge from one place to another with amazing rapidity, and thus compensates for the want of the horse. His flesh forms an agreeable and wholesome food. His skin is converted into clothing; his sinews into bow-strings, and even into threads. His bones are formed into spoons, and from his horns is manufactured glue. An animal affording advantages so numerous, might justly claim some attention to be paid to its preservation and nourishment, but nature has spared the Laplanders even this trouble. In summer, the rein-deer collect in immense herds, and repair to feed on the mountains, or in the forests. In winter, when the face of the ground is covered with snow, and vegetation appears to have entirely ceased, these hardy animals, with their hoofs and horns, dig into the snow, and find a small plant, called the rein-lugwort, of which they are extremely fond. Thus the owner of a herd of rein-deer enjoys all their advantages with little trouble. When he wants milk, he draws it from the animal; when he desires flesh, he selects one from the herd and kills it; and when he has killed it, he finds every part of it useful. All his trouble consists in training such as are to be yoked in the sledge, and in keeping his herds from mingling with those of his neighbours. Thus almost every Laplander can have a great number of these animals. Some individuals who in Lapland are accounted rich, can boast of possessing upwards of a thousand. When yoked to a sledge, they travel with great velocity, and continue long without being tired. Unless completely trained, however, they not unfrequently become restive, and endanger the lives of their drivers. The rein-deer are still found in a wild state, in the northern parts of Norway; but the greater number are claimed by individuals, and tamed so far as to feed in the herd, and return home at particular seasons.

Animals.] Besides the rein-deer, Norway has the bear, the wolf, the lynx, the glutton, and the lemming, or Norway mouse; the two last being, in some degree, peculiar to the country. The elk is found in the southern districts of this region. The beaver is found in Norway, as well as in America. Hares, foxes, and the squirrels which furnish the well-known fur called *petit gris*, are not uncommon; and in winter, they assume a white, or, at least, a grey colour. Some birds are mentioned as being peculiar to Norway, such as the *picus tridactylus*, and the *tetrao lagopus*.

Minerals.] Gold, silver, lead, copper, iron, salt, and sulphur, are the minerals of Norway. Beautiful granite, rock crystals, garnets, and amethysts, are also found in some districts. The Norwegian cordierite, when cut and polished, exhibits a stellular opalescence resembling that of the stellular sapphire.

CHAP. II.—INHABITANTS—MANNERS AND CUSTOMS.

1st. Norwegians.] The bulk of the nation are Normans, or Norwegians, who, like the Swedes and Danes, are of Germano-Celtic origin. They are generally of middle stature, well-formed, and of a resolute and energetic character, though in few instances capable of continued exertion. They are better soldiers and sailors than agriculturists. Their language bears considerable affinity to the Swedish and Danish, but is more nervish and manly. In early life, their hair is generally fair, and their complexion clear and ruddy. The women are often very handsome, with expressive blue eyes, and the most regularly formed features. Coxe assures us, that excepting in Switzerland, he never saw peasants who appeared to enjoy more of the comforts of life than the peasants of Norway. The dress is plain and simple, that of the men being generally of a stone colour, with white metal buttons, and red button-holes. They manufacture a stuff resembling the Scottish plaid; and they make linen of a good quality. The women are often seen dressed only in a petticoat, and shirt with a close collar, and round their waist a black sash, or girdle. Their manner is open, sincere, and, perhaps, by the advocates of ceremony, would be esteemed blunt. Instead of the distant bow, they frankly advance, and take the person whom they salute by the hand. The contrast between the manners of the Danes and Norwegians, is an evident illustration of the power of moral causes on the human character; and is, at the same time, directly opposed to that system which deduces the dispositions of men from the climates in which they live. Denmark is a cold country, but Norway is still colder. According to the physical theory, therefore, the Danes might be expected to be dull, and the Norwegians still duller. The Danes are indeed a torpid race, but the Norwegians are animated and sprightly. We must search for the causes of national character in something different from the climate, and the cause may with little difficulty be discovered. Man is never lively under oppression, and seldom is he dull or melancholy when he enjoys freedom, with a moderate degree of affluence. It is not strange, therefore, that the long-enslaved Dane should be frigid and heavy, or that the till lately independent Norwegian should display an animated dignity. It cannot be denied, however, that, notwithstanding the small influence which climate has upon the human character, and the essential powers of the human mind, it has a considerable influence on the ordinary customs of life; and, consequently, on the appearance of the human frame. This is clearly exemplified in the customs and appearance of the Laplanders.

2d. Laplanders.] The Laplander inhabits a region where wholesome food is far from being plentiful; his size is, therefore, generally diminutive, and his limbs are deficient in those proportions, which are reckoned in other places essential to beauty. Notwithstanding the meanness of his appearance, the Laplander, from his manner of life, is hardy, robust, and strong beyond what his size would indicate. He is not only more hardy than the muscular Norwegian, but so much more strong, that the stoutest of his southern neighbours cannot bend his bow. The Norwegian Laplanders are in general more wealthy than their Swedish brethren. Those inhabiting the coast-districts support themselves entirely by fishing.[30]

[30] The limits of the country which, in the geography of Russia, Sweden, and Norway, receives the general appellation of *Lapland*, are not very precisely ascertained,

3*d*. *Finns*.] A considerable number of Finnish colonists appear in Norwegian Lapland. They are called by the country-people, *Quäner*. Far within the polar circle, the patient Quäner continues to raise a scanty crop of potatoes and rye, and to struggle successfully with the severities of the rude climate.

but may be said to comprise the whole tract extending from 12° to 40° E. longitude of Greenwich, or 800 British miles; and from 64° N. latitude to 71° 10′ N. latitude, or 500 British miles; but from the head of the Bothnian Gulf at Tornea, in latitude 65° 50′ to the North Cape, is not above 400 British miles. It consists of three grand divisions, namely, Russian, Norwegian, and Swedish Lapland. In consequence of the treaty of 1809, Russian Lapland comprehends all the tract extending from the east of the Tornea River to the White Sea, and which is included in the governments of Archangel and Finland. Norwegian Lapland, the smallest division, comprising a surface of 45,360 British miles, is included under the government of Norway. This is a narrow stripe, included in the bailiwick of Drontheim, stretching along the west and north coast, and is divided into three portions, namely, Norland, Western and Eastern Finmark; Western Finmark being watered chiefly by the Alten, and Eastern Finmark by the Tana. The Lapponian population has been estimated at 6000. Swedish Lapland is the largest and most important division, containing upwards of 100,000 square miles of surface, with a population of 6000, and may be denominated Interior Lapland, all its rivers flowing into the Bothnian Gulf, and comprehending the whole tract between that Gulf and the semicircular range that separates it from Danish Lapland, and the Tornea, which separates it on the east from Russian Lapland. With this explanation, we may here introduce a few general observations on the manners and customs of this curious and interesting race of men. The dress of the Laplander, or, as he calls himself, the *Same*, is simple, and calculated to resist the effects of a cold climate. In summer, it consists of a coat of coarse cloth, fastened round the middle with a girdle. To this girdle, which is decorated with chains, brass rings, and other ornaments, according to the wealth of the wearer, are hung a knife, and a kind of bag or pocket, containing tobacco, flints, and matches. The cap is made of the skin of a fowl, with the feathers on, chiefly the skin of the northern diver. The shoes are of the hide of the rein-deer, with the hair outwards. In winter, the coat of cloth is changed for one of rein-deer skin, and they then add caps, boots, and gloves of the same material. Perhaps the curious reader, says Linnæus, will wonder how the people in Lapland, during the terrible cold that reigns there in winter, can preserve their lives; since almost all birds, and even some wild beasts, desert it at that time. The Laplander, not only in the day, but through the whole winter nights, is obliged to wander through the woods with his herds of rein-deer; for the rein-deer never come under cover, nor eat any kind of fodder, but a particular kind of liverwort. On this account, the herdsmen are under the necessity of living continually in the woods, in order to take care of the cattle, lest they should be devoured by wild beasts. The Laplander easily does without more light, as the snow reflects the rays that come from the stars, and as the *aurora borealis* illuminates the air every night with a great variety of figures. No part of our body is more easily destroyed by cold than the extremity of the limbs, which are most remote from the sun of this microcosm, the heart. The kibes that happen to our hands and feet, so common in the northern parts of Sweden, prove this. In Lapland you will never see such a thing; although, were we to judge by the situation of the country, we should imagine just the contrary, especially as the people wear no stockings, as we do not only single, but double and triple. The Laplander guards himself against the cold in the following manner. He wears breeches made of rein-deer skins with the hair on, reaching down to his heels, and shoes, made of the same materials, the hairy part turned outwards. He puts into his shoes slender-eared broad-leafed cyperus grass (*carex vesicaria*, or the bladder carex,) that is cut in summer and dried. This he first combs and rubs in his hands, and then places it in such a manner, that it not only covers his feet quite round, but his legs also; and being thus guarded, he is quite secured against the intense cold. With this grass they stuff their gloves likewise, in order to preserve their hands. As this grass keeps off the cold in winter, so in summer it hinders the feet from sweating, and at the same time prevents them from being annoyed by striking against stones, &c. for their shoes are very thin, being made, not of tanned leather, but of the raw hide. The dress of the women differs from that of the men chiefly by having a greater number of ornaments. In summer, coarse blankets are used for bedclothes, and in winter their place is supplied by furs. The Laplanders, like many of the tribes inhabiting the northern parts of the world, have different habitations for summer and winter. The summer abodes are tents formed of poles, covered with skins, and ornamented with a considerable degree of elegance. The winter residence is more substantial, built of stone and turf, roofed with beams, and covered with turf, bushes, and earth. Instead of a door, which would admit too much of the cold, they have a small passage through which it is necessary to creep on the hands and feet. To prevent the bad effects of the damp, the inside is wholly covered with skins. A house is made so large, as to contain ten or twelve families, of which each has

Religion.] These three nations all profess Lutheranism. The Laplanders, however, retain so many of their ancient superstitious practices, that their religion hardly deserves the name of Christianity. There are no privileged ranks in Norway; the citizens being distinguished only by their different occupations.

its own space, marked off by partitions of skins, in a manner somewhat resembling the stalls of horses. On one side of the house there is a clear passage from one end to the other. On the same side are the windows, formed of the intestines of seals, joined together with much neatness. Under these windows is placed a bench for the accommodation of visitants. The other side of the house, which is divided by partitions as already mentioned, is occupied, from the wall to the middle of the floor, by a broad bench raised above the floor a foot or eighteen inches. This bench serves to sit on by day, and to sleep on by night. At the post of each division hangs a lamp, formed of chalk or soft marble, in which is burnt the oil of seals, with moss, instead of cotton. This lamp not only gives them light, but serves to cook their victuals, and furnishes the house with the necessary warmth. The furniture of their houses is generally extremely simple, and consists of kettles of copper or iron, bowls, cups, and spoons of wood, and sometimes a few vessels of tin, and even of silver. Their fishing and hunting implements form always a considerable part of the furniture, and as on them depends their existence, they attract no small share of esteem. At meals a mat is spread upon the floor or bench; each has his separate dish, and distinct portion. A short prayer is pronounced before and after eating. The chief employments of the Laplanders consist in hunting, fishing, herding the rein-deer, constructing canoes, sledges, and harness, and what may perhaps appear strange, managing the affairs of the kitchen. The women make nets, cure the fish and game which the men bring home, milk the rein-deer, make cheese, tan hides, form them into clothes, and prepare those ornaments with which their girdles are decorated, and of which they are so fond. Lapland being covered with snow during a great part of the year, the natives, in their journeys from place to place, are constrained to adopt such modes of procedure as the nature of their road renders necessary. When they proceed on foot, they have snow-shoes of a length equal to that of the wearer, and of considerable breadth. With these fixed on his feet, and a longe pole in his hand, to direct his movements, the Laplander proceeds with amazing velocity, travelling it is said, though somewhat improbably, 60 miles in one day. But the Laplander seldom fatigues himself by journeys on foot. He generally has recourse to his sledge. This machine in form resembles a boat. The traveller seats himself in it and is bound to it, in a manner which strangers consider as being somewhat uneasy. The harness is fixed round the neck of the rein-deer, and passing between the fore-legs and hind-legs, is attached to the head of the sledge. The reins are fixed round the bottom of the animal's horns, and the driver carries in his hand a stick to assist him in directing the motions of his machine, and to disentangle it from such objects as may come in the way. The Laplander whispers in the ear of the rein-deer the direction in which he is to travel, and the place at which he is to stop; and he firmly believes that the animal understands him. When the deer is driven hard, he sometimes passes over 70 or even 80 miles a-day; but such exertions are seldom unattended by hurt to the animal: 50 miles is a more common journey; and if we consider that in all this space, the deer has no other refreshment than what he can procure by dipping his nose among the snow, it must be allowed to be an exertion of which few other creatures are capable.

When a Laplander has fixed his affections on some female acquaintance, and is desirous of entering into the bonds of matrimony, he takes along with him several mediators, several bottles of brandy, and a present for the young woman. The brandy is for the father, to whom application is first made. The lover remains without; the mediators enter, and, with the father of the damsel, over the brandy, discuss the advantages and disadvantages of the proposed alliance. If the suitor be agreeable to the parents, he is then permitted to enter; he is introduced to his intended bride, and offers her the present which he has brought with him for that purpose. The lover visits his mistress as often as he chooses, but must never forget to bring with him the father's perquisite, a bottle of brandy. This present is so agreeable, that to procure it, the celebration of the marriage is not unfrequently delayed for several years. At length they are publicly married by the priest of the parish; but even after this, the young man is obliged to serve his father-in-law, according to some, four years; according to others, and indeed more probably, one year. When this term is expired, the married couple retire to their new hut. The husband receives presents from all his friends, and the wife carries along with her a number of rein-deer. Almost the only education both of boys and girls, consists in acquiring those arts which are so necessary to their future existence. No sooner can a boy draw the bow, than he is trained to shooting; and, as an incitement to industry, he is compelled, before he receive his breakfast, to win it by hitting the mark assigned to him.

The inhabitants of Lapland live in a very severe climate. As, however, they are from necessity temperate, they are in general healthy, and retain all their vigour to

CHAP. III.—GOVERNMENT—FINANCES—ARMY AND NAVY—COMMERCE AND MANUFACTURES.

Constitutional Laws.] THE constitution of Norway is that of the 31st May, 1814, confirmed in the Stoerthing on the 4th November following. Norway, by the first article of her constitution, forms a free and independent State, united to Sweden under the same king. By the 25th and 110th Articles of the Constitution, her finances, administration, legislation, and land and marine forces, are distinct and separate from those of the Swedish kingdom. It is further declared, that only native Norwegians, professing the Lutheran faith, shall be eligible to State employments, with the exception of professorships; that Norway shall be liable only for its own national debt; that the Norwegians shall be governed by their own national code of laws; and that no citizen shall be liable to imprisonment except in cases fixed by law; that the liberty of the press shall remain inviolate; and that landed property cannot be forfeited to the State. The *ockls* and *aasardes* are also declared inviolable. According to this singular law, every man whose ancestors have, at any time, possessed a freehold, and who every ten years has declared, in the proper court, that he claims the estate, but that he is unable to redeem it, may, when he has acquired sufficient wealth, recover the

the extremity of old age. When a Laplander has breathed his last, the greater part of those by whom he was surrounded take a hurried leave, lest the spirit of the departed person should hurt them. The following quotation, though relating to Russian Lapland, may give an idea of the mode of burial in Lapland in general :—" Coming to the house of the deceased," says a late traveller, " we saw the corpse taken from the bears' skins, on which it lay, and removed into a wooden coffin, by six of his most intimate friends, after being first wrapped in linen, the face and hands alone being bare. In one hand they put a purse with some money, to pay the fee of the porter at the gate of paradise; in the other a certificate, signed by the priest, directed for St Peter, to witness that the defunct was a good Christian, and deserved admission into heaven. At the head of the coffin was placed a picture of St Nicholas, a saint greatly reverenced in all parts of Russia, on account of his supposed friendship for the dead. They also put into the coffin some brandy, dried fish and venison, that he might not starve on the road. This being done, they lighted some fir-tree roots, piled up at a convenient distance from the coffin, and then wept, howled, and made a variety of strange gestures and contortions, expressive of the violence of their grief. When they were fatigued with noise and gesticulations, they made several processions round the corpse, asking why the deceased had died? Whether he was in want of food or raiment? If he had been unsuccessful in hunting or fishing? After these interrogations, they renewed their howling. One of the priests frequently sprinkled holy water on the corpse, as well as the mourners." In some places, they put into the coffin an axe, with a flint and steel; the former to cut down such thickets and brambles as may obstruct his passage to the other world; the latter to strike a light, should he happen to be in the dark, either in the course of his journey, or at the end of it. When the body is buried, an old sledge, with its bottom upwards, is placed over the grave.

If a Laplander, when he first leaves his hut in the morning, meet any thing which he conjectures to portend some evil, he instantly returns, and remains immured during the whole day. The profession of a magician is profitable, and, consequently, common. They have different methods of prognosticating future events, but that by the drum is very generally practised, and is in much esteem. On the drum used for this purpose are inscribed the figures of many of the ancient gods of the country, of the sun, moon, stars, birds, of Christ and his apostles. On the top are placed several small brass rings; the drum is beat with a little hammer; the rings move in various directions upon the figures, and, according to these movements, the sorcerer foretels future events. Almost every hut possesses a black cat, an animal supposed to have almost as much knowledge of futurity as any of their sorcerers. With this cat the Laplanders converse as with a rational creature. It is consulted with regard to the most proper seasons for hunting and fishing, and attends such as are so employed. In short, by the advice of the cat are conducted all the important concerns of the family. Many of the ancient gods of the country are not only held in the highest esteem, but are occasionally worshipped. The transmigration of the soul seems to be a prevalent article of belief.

possession of his forefathers. In this case, the immediate proprietor is compelled to quit his property for the estimated value. This renders every one careful to preserve an exact knowledge of his descent, and fixes the affections of a family to that spot which has long remained the property of the race. At the same time, as has been justly remarked, it greatly diminishes the value of land, few being willing to purchase, and still fewer being willing to improve what they know may soon be taken from them; and which at a certain conjuncture, the laws of their country will compel them to abandon. It is further declared, by the constitutional laws of the kingdom, that no earldom, baronies, or entails, shall be established within the Norwegian boundaries.—Every Norwegian, without regard to fortune, is obliged to carry arms for a certain period. The commerce of the country, it is expressly stipulated, shall continue to be carried on under the Norwegian flag. The title of the king is *A. B. by the Grace of God, King of Norway.*

Form of Government.] Norway is governed by an hereditary limited monarchy, in which the king has the executive and the Stoerthing the legislative power. The Council of State is responsible for the acts of the sovereign, who must be of the Lutheran church. The succession is lineal, and to agnates of the dynasty of Bernadotte. On the failure of the royal line, the Stoerthing of Norway, and the Swedish diet, shall be convocated on the same day, to deliberate on the proposal which may be submitted to them by the king or interim government, regarding the destination of the crown. Within 12 days thereafter the election must take place. On the day preceding the election, a committee of 44 is appointed, who, in the event of the choice of the Swedish and Norwegian States falling upon different persons, shall assemble, and fix the succession by a majority of votes. In the case of a minority, the government shall be conducted by a Council of State, of 10 Norwegians and 10 Swedes at Stockholm, in which the Minister of either country, as shall be determined by lot, shall preside. The choice of the minor's guardian shall be determined in the same manner as the election to the throne. The king is of age at 18; and must take an oath on his accession, that he will govern Norway according to its constitutional laws. He is then anointed in the cathedral of Drontheim: and it is expected, that, unless under some extraordinary emergency, the king shall spend some time of every year in Norway. He appoints a council of 8 Norwegians—none of whom must be under 30 years of age—as his representatives in his absence. He can also name a viceroy in his absence, who must be either the Crown Prince, or the eldest son of the Crown Prince. The Norwegian Minister of State, and two members of the Council, must be present at every deliberation on Norwegian affairs. The civil list was fixed by the Stoerthing, in 1818, at 1,112,000 dollars.

The Stoerthing.] The Stoerthing assembles, on the 1st of February, every third year, in Drontheim, and remains assembled for three months. Its members are elected at a meeting of electors which assembles every three years. Every 50 inhabitants of a town, and every 100 persons living in the country, send one elector to this assembly; and the whole number of representatives in the Stoerthing must not be less than 75 or above 100. A member of the Stoerthing must be at least 30 years of age, and have resided 10 years in the country. No member of the Council of State, or any one enjoying an office or pension under government, is eligible to the Stoerthing; but every one who is elected is obliged to

attend and discharge his duties as a member, if the election has not fallen upon him for the third time; his expenses are also defrayed by the State. The king has the power of convening extraordinary meetings of the Stoerthing; but there must always be present at least two-thirds of the representatives. One-fourth of the members from the *Lagthing*, and the other three-fourths, the *Odelsthing*, each of which has its own president and secretary. The Stoerthing can decree laws, impose taxes, grant loans, pass naturalizations, inquire into alliances and treaties, and summon every citizen before it, except the king or members of the royal family. Every law must be proposed in the Odelsthing, and afterwards submitted to the amendment of the Lagthing. Should the two chambers disagree in their views of any law, they are convened together, and by a majority of two-thirds, ultimately reject or adopt the law. Having passed the Stoerthing, the law is carried by a deputation to the king, whose approval makes it law. Should he reject any law, the same Stoerthing cannot propose it anew; but the second may; and on the proposal of the third, the law must pass into effect, whether sanctioned by the king or not. All laws are written in Norwegian; and the Stoerthing deliberates with open doors. Any attempt to endanger its privileges, is construed high treason.

Administration.] The ministry consists of the viceroy, a minister of State, 10 counsellors, and a secretary, who decide by a majority, and afterwards report to the king. The Council of State and the Lagthing, compose the highest tribunal of the State, and take particular cognizance of State-offences. A high court of justice, consisting of three members, is established in each of the four provinces, or bailiwicks, of Norway. And these provinces are again subdivided into inferior districts, with their respective courts. A general civil and criminal code has been projected for the kingdom. The highest tribunal of justice is composed of a president, or justiciary, and six ordinary, and three extraordinary, assessors. No member of this tribunal must be under 50 years of age. The police is very effective.

Ecclesiastical Establishment.] The clerical body consists of five bishops, viz. one for each of the governments, and one for Norland, with 49 deans, and 379 pastors. The king nominates the bishops, and the deans are chosen by the clergy of their diocese. The livings are in the hands of patrons. The bishop of Aggerhuus is considered as metropolitan. The yearly revenues of the bishoprics are calculated to be, the highest £600, and the lowest £400, sterling. From the tribunal of the deans, an appeal lies, in ecclesiastical affairs, to the bishops. A missionary college at Drontheim is especially devoted to the conversion of the Laplanders.

Literature.] Norway has its own language, but it cannot be said hitherto to have possessed any national literature. Its scholars and eminent men, even its first poet, Holberg, have all written in Danish, and we do not possess a single original work in the Norwegian language. But the Norwegians are by no means destitute of a taste either for the sciences or fine arts. Mathematics, natural history, and history, are much cultivated. Even among the common people, we find good calculators and ingenious mathematicians. A favourite amusement with the country people, is to recount the tales and traditions of ancient times. Newspapers were established in this country in 1803. Danish, German,

and Swedish books, are pretty extensively read. The periodicals of Germany have likewise penetrated to the highest north.

Education.] The education of youth is chiefly intrusted to itinerant schoolmasters, who usually reside a fortnight at every hamlet. Nevertheless, it is rare to meet with a peasant in Norway who cannot both read and write. The town-schools are very ill-organized; but the high schools of the five principal cities are nowise inferior to the very best establishments of the kind in Europe. There are two seminaries for instructing schoolmasters. The university of Christiana was founded in 1809. In 1816, it contained 16 professors, and about 150 students Besides these institutions, there is a royal school of cadets in Christiana; an establishment for the instruction of young Laplanders at Drontheim; and a commercial academy at Christiana.

Societies.] The two principal learned societies of Norway, are the Royal Society of Science at Drontheim, and the Patriotic Society of Christiana. There are upwards of 60 agricultural societies established throughout the kingdom.

Finances.] The revenue and expenditure of the kingdom has been estimated at 1,597,217 specie dollars, or £379,339 British currency. The interest of the national debt of Norway amounts to 41,000 rix dollars, or about £6000 British; but the paper money, with which the country has been inundated, renders it very difficult to meet this burden. In 1817, a national bank was opened with a capital of 10,000 shares, each share being 200 specie dollars; but we believe the scheme was not popular.

Army.] The military force of Norway is from 10 to 12,000 regulars —2000 of whom are employed in garrison duty, 1,285 artillery, and 1,070 cavalry, and a somewhat larger body of militia. Attached to the former, are three battalions, who wear on their feet long boards, or snow shoes, and are trained to act on the snow and ice. The national troops of Norway, though they are embodied and exercised, upon the whole, much in the same manner as the Danes, are raised in a manner somewhat different. The territory is divided into a number of districts, of which each furnishes a soldier. Every male, at his birth, is registered for the militia, and from the first on the list all deficiencies are supplied. After a service of ten or fourteen years, they take their place among the invalids, and having remained in that situation for some time, they are dismissed. Conscription is the mode usually resorted to for supplying the regular forces. A late decree of the Stoerthing, directed the whole fortresses throughout the kingdom to be demolished.

Navy.] The navy of Norway is upon a very small scale, amounting to only 6 brigs, 8 schooners, and 77 gun-boats. These vessels are generally situated at Christiana, Christiansand, and Friedericstadt. At the two latter ports there are docks.

Commerce.] From the earliest period, the Normans have sustained the character of bold and skilful navigators. The sea is still their element, and the vicissitudes and dangers of a maritime life are highly congenial to the national spirit. The internal commerce of the country is very insignificant, on account of the bad roads and difficulties of carriage. In the higher latitudes, almost the only commerce is that of barter. In other districts, the only commercial intercourse is conducted by coasting vessels, the commercial towns being all situated on the coast.

Since the union with Sweden, the passes, or defiles, between the two countries, have been kept in good order. The only mail known in the country is the government post.

Exports.] The principal exports are wood, fish, iron, copper, glass, alum, marble, kelp, dyeing lichens, pickled meat, hides, fur, feathers, oil, tar, and pitch. But the external commerce considerably declined during the transference of Norway from the Danish to the Swedish crown.

Imports.] The imports consist of corn, wine, spirits, salt, and soft goods. In average years, the importations and exportations nearly balance each other; but in bad years, the balance is against Norway.

Fisheries.] The fisheries of Norway are very extensive and productive, employing 80,000 hands, and producing an annual revenue of 1,500,000 dollars. Vaage is the central point and chief place of the northern fisheries. The herring fisheries have of late years been very unproductive, but formerly the exports of herrings to the Baltic, from Bergen, amounted to 100,000 barrels. A small species of herring is exported, under the name of anchovies.

Mines.] The most celebrated silver-mines of Norway are those of Kongsberg, which were discovered during the reign of Christian IV. The silver is generally found in ore, and extracted by the usual process, though sometimes it is found pure in small grains, and instances are not wanting of its having been found in considerable masses. One piece, which is still preserved in the cabinet of curiosities in Copenhagen, weighs 409 marks, and is said to be worth 3000 rix-dollars, or £600. These mines formerly produced about £70,000 annually. In 1805, the working of them was given up on account of their unproductiveness; but they were again opened in 1815. However, as the produce seldom does more than cover the expense, and, it seems, is not sufficient even for that purpose, the mines are of little advantage to government. Their chief utility consists in affording employment to a great number of indigent persons, and in supplying the kingdom with currency. Even at Kongsberg, where the silver is taken from the mine, the workmen are constantly paid in paper currency. At some distance from Kongsberg, at a place called Fossum, is a mine of cobalt. Productive copper mines are open at Roraas. They were discovered in 1614, and yield a considerable revenue to the crown. At Quickore and Selboe, other copper mines are wrought; but they appear to be more inconsiderable than those at Roraas. But of all the mines which occur in Norway, none are more truly valuable than those which produce iron. Of these, the chief are said to be situated in the southern parts of Christiana. Lead mines are found near Kongsberg, and alum in the vicinity of Christiana.

Monies.] The coins and measures of Denmark are still current in Norway.

CHAP. IV.—TOPOGRAPHY.

NORWAY is divided into four provinces, called bailiwicks, viz. Aggerhuus, Christiansand, Bergen, and Drontheim.

1*st.* *Aggerhuus.*] The bailiwick of Aggerhuus, receives its name from a fortress in the neighbourhood of Christiana. It is a romantic and mountainous district, abounding in lakes and streams. The soil is in the small valley tolerably fertile. It is separated from Drontheim by the towering

Dovrefieldt. The principal river is the Glommen. The climate is severe; but the winter is not earlier than in the north of Germany. Summer begins in May. The rearing of cattle, and working of iron mines, are the principal employments of the inhabitants. The territorial extent of this district, is about 40,000 square miles, with a population of 450,000.

Christiana.] Christiana, the capital of the bailiwick, and of the kingdom, is situated at the foot of the Egeberg, in a fertile valley upon a bay of the Christianafiorden. It was founded, 1624, by Christian IV., and built according to a plan drawn by himself. Opsloe formerly stood upon the place now occupied by Christiana, but was destroyed by fire. The streets are generally about 40 feet broad; they cross each other nearly at right angles, and are kept very clean. It has a military hospital, four churches, two theatres, a house of correction, a university, and in 1827, contained 20,581 inhabitants. It has a good summer harbour, and a considerable trade. There are a number of beautiful villas in the neighbourhood. The country round it has many mines, and much metal is exported from it; but deals and tar form the staples of its commerce: besides these articles, it exports soap and some alum.

The town of Friederickshall, which contained nearly 4000 inhabitants, was totally consumed by fire, on the 18th June, 1826. On a high rock, in the vicinity of this town, lies the castle of Friederickstein, at the siege of which Charles XII. was killed in 1718. Not far from this place, is the famous cataract of Sarp, where the Glommen precipitates itself over a rock 60 feet in height. The town of Kongsberg is situated in a deep, dark, wild looking valley, at the foot of the Eans Knuden. In this town there is a mining school. The number of inhabitants is 6,800.

2d. Christiansand.] The most southern and smallest of all the Norwegian provinces is Christiansand; the territorial extent of which is estimated at about 10,000 square miles, with 130,000 inhabitants. This is a very mountainous district, intersected with small but rapid streams. The capital of the same name with the province, is situated upon a spacious bay at the mouth of the Jorredalelf. It is protected by the castle of Friedericsholm, and contains 7000 inhabitants. It has a good harbour, much resorted to by ships frequenting the Cattegat. A part of the busy little port of Arendal in this bailiwick is built upon piles. In the neighbourhood of this place are extensive iron mines. The town of Stavangar contains about 2,300 inhabitants. The town of Findoea, on an island in this bailiwick, contains a very ancient church, in which there is a monument dedicated to commemorate some victory over the Scots, and the pretended grave of the northern hero Torfian. Askoe, another island, now contains a celebrated spring which is very cold in summer, but is never known to freeze in winter. A very productive lobster-fishing is established at the promontory of Lindenaes.

3d. Bergen.] The bailiwick of Bergen extends to nearly 14,000 square miles, and contains a population of 156,000. This is a mountainous country with a deeply indented coast. The ridge of the Floyfield and Olrick, rises to the height of 1,800 feet in the interior of this province. The mountains are covered in their lower regions with stunted birch and furze; but have their summits clothed in perpetual snow, which frequently descends in avalanches. There are no large inland lakes or rivers; but a great number of springs, and small ponds. The climate is damp; and the rearing of cattle and fishing forms the principal employments.

Bergen, the capital, is situated upon a small gulf of the sea, in a valley, and was founded near the conclusion of the eleventh century. It is strengthened towards the sea by the fort of Berginhuus, the tower of Nordnäss, the fort of Friedericsberg, and the rocky island of Christiansholm. On the land side it is sheltered by mountains. The greatest part of the houses are of wood, though some of them be of stone. The most remarkable edifices are the castle and the cathedral. It has suffered frequently, and severely, from fire. The harbour is good, and the population amounted in 1827 to 20,844, who, from the want of the means for agriculture and manufactures, employ themselves chiefly in navigation, trades, and fishing. The inhabitants of the adjacent province of Norland, and indeed the whole east coast, bring hither their dried fish and train oil, which they exchange with the Dutch, English, &c. for corn and the other necessaries of life, in which Norway is deficient. The merchants of Bergen possess a few ships, with which they trade on their own account. The German comptoir enjoys the monopoly of the Norland trade. It has one hospital, chiefly for persons infected with leprosy, a disease of frequent occurrence among the fishermen along that coast, and arising, most probably, from their mode of life. Here is, also, a school, a theatre, two printing offices, and the *Seminarium Fredricanum*, founded in 1750, by the well-known bishop Pontoppidan, wherein twelve young men are educated gratis. Holberg, the poet, was a native of Bergen.

In the island of Fidje, belonging to this bailiwick, Harold Halfager, the first king of Norway, is said to have had his residence. The island of Mosteroe, famous for its fine marble quarries, is also celebrated as having been the site of the first Christian church in Norway, which was founded, A. D. 997.

Drontheim.] The province of Drontheim, the most northern of the kingdom, in ecclesiastical administration is subdivided into two different bishoprics; the one, comprehending the bailiwick of Drontheim; the other, the provinces of Norland and the Finmarks. These bishoprics are so different in a geographical aspect, that we shall adhere to this division, in our account of the province itself. The total extent of the province, is nearly 75,000 square miles, with a population of nearly 340,000.

The territory of Drontheim Proper, comprehends nearly a third part of this superficial extent, and more than one-half of the population. In physical features, this district resembles those already described. The Drontheimfiorden, nearly divides the country into two parts. An excellent pass conducts over the Dovrefieldt; but the mountains every where assume a bleak and terrific aspect.

Drontheim, or *Tronkiem*, the capital of the province, is one of the most flourishing places in the kingdom, containing a population of 12,000. It is situated on the south bank of the Nidelf, on an arm of the sea by which the town is nearly surrounded. The fortifications by which it was once protected have fallen into ruins. The streets are wide and regular, but the houses are mostly of wood. Situated nearly at the point of union of four great valleys, and most conveniently for communicating with Sweden, and having a good harbour, it has a considerable trade. The chief exports are copper, iron, timber, and fish. The imports are groceries, cloths, wine, and corn. Drontheim is very ancient, and was the seat of government while Norway remained a separate kingdom. It is still the residence of a bishop, and has a magnificent cathedral, in which the

ancient kings of Norway used to be crowned, and which as the burial place of St Olaf, received a high reputation for sanctity in the dark ages.

Roeraas.] The town of Roeraas is built on a very wild situation, but presents a pleasant appearance. The population amounting to 2,200, is wholly supported by the working of the copper mines in the neighbourhood. These mines annually yield upwards of 12,000 tons of ore; and are wrought by a joint-stock company.

The Island of Vigren is celebrated in history as the spot from which the Norman Ralph, afterwards called Robert, took his departure for the conquest of Normandy.

Christiansand, with a population of 1624 souls, has a good harbour, and conducts a brisk trade.

Norland.] With the exception of a small stripe on the southern edge, Norland lies entirely within the polar zone. The Kiolen range, runs through the interior of this district. The plain is covered almost wholly with marshes and morasses, which, in the highest latitudes, remain perpetually frozen. The seven sisters of Alsen are rocky summits, which rear their snow-capped heads to the height of nearly 4000 feet. The riches of this country, are fish and fur. The metals which exist here, are not wrought. The only tax paid by the Laplanders, is about one penny of our money for every twenty rein-deers.

Alstahong, the seat of the bishop, situated upon the Island of Alster, has a population of 5000 inhabitants.

The Maelstrom.] The group of the Loffodden and Westeraalen Islands, forming a crescent around the Westerfiorden, has a population of 11,000 souls, who are entirely engaged in fishing. The tide streams with great violence through the narrow straits which separate these islands, and in some places, forms a kind of cataract which, when the north wind blows against the low tide, becomes very formidable to navigators, and creates the whirlpool already described, known to mariners by the name of Maelstrom.

The largest island of this group, and of the whole kingdom, is Hindoeen. The chief seat of the Lapps and Quaners, is the district of Finmarscens, in which the *Altens praestegield,* under the 70th parallel, must be considered the paradise of the Polar zone. The chief towns, are Hammerfest and Vardoee, containing respectively, 77, and 87 inhabitants! An attempt has very recently been made, under the superintendence of two Englishmen, to found a sea-horse fishery and colony in lat. 77° 50'.[1]

Authorities.] Chorographisk Beskrivelse over Kongeriget Norge, etc. af N. Sogne. Kiöbenh. 1779, 4to.—Provinzial—Samlinger. Bergen, 1701, 8vo.—Topographisk Journal for Norge Christiana, 1792.—Skiöldebrand's Journey to the North Cape, 8vo., 1813.—A. Lamotte, Voyage dans le Nord de l'Europe, 1814, 8vo.—Clarke's Travels, vols. X. & XI.—Gemählde von Norwegen, Hamb. 1815, 8vo.—Ded sydliche Norge, etc. ved. C. J. Pontopiddan. Kiöbenh. 1785.—Det nordlige Norge af C. J. Rontopiddan. Kiöb. 1795.—Specielle Karter over den norske Kyst, brigin. opmaalt ect. utg. fia det kongl. Seekart Archiv. Kiöb. 1791 —1803. 7 feuil.

[1] Since the above description of Norway was written, we find that, by a census finished in 1827, the population was found to be 1,050,132 souls.

GERMANY.

Name.] How this country came to be called *Germany*, and the inhabitants *Germans*, is difficult to guess, and hardly worth any serious inquiry. Questions of this kind are more easily asked than solved; and the same difficulty recurs, when treating of the ancient names of modern countries; as for instance, Why was Scotland called *Caledonia?* Why was our island denominated *Britain*, and *Albion?* and Why was France anciently called *Gaul?* To these questions, learned antiquarians have given various and discordant answers, between which it is now impossible to decide. The most probable conjecture respecting the origin of the name *German* is, that it was an appellation bestowed by the Gauls upon those wandering but warlike tribes who had crossed the Rhine, long before the days of Julius Cæsar, and settled in Belgic Gaul. The appellation *Gehr-man*, is Celtic, and signifies 'a warlike man,'—an epithet at once appropriate, and indicating the light in which these savage and ferocious tribes would be viewed by their more polished but less warlike Gaulish neighbours. To this term, their after name *All-man*, also alludes, signifying 'a complete man.' This last epithet the Romans borrowed from the Gauls, who bestowed it upon those tribes who inhabited the country now called Wirtemberg, but who afterwards crossed the Rhine and settled in Alsace. But the term *All-man*, or the *Alemanni* of the Romans, fell into disuse after the political extinction of the Alemanni by the Franks, another German tribe, or rather collection of tribes, in 496, while the term *Gehr-man*, *Germani*, or *Germans*, gradually passed from the west of the Rhine, to the east of that river, and was extended in Cæsar's time, as a common or generic name, to all the wandering tribes who roamed along the banks of the Rhine, the Danube, and the Elbe, or in the inaccessible wilds of the Hercynian forest. The term *All-man* is still retained in the French *Allemagne*, by which Germany is constantly designated amongst its western neighbours. The term *Teutones*, from which their present name of *Deutschen* is derived, is of much greater antiquity than the appellation *Germans;* and in the 5th or 6th century the Germans begun to call their country *Deutschland.* The origin of this name is uncertain. Some, indeed, derive the name *Teutones*, or *Theutschen*—now written *Deutschen*—from *Theuth*, or *Teut*, called *Teutates* by Lucan, and *Tuisto* by Tacitus, the most ancient deity of the Germans and Scandinavians. But this is not satisfactory. It is more probable that the god derived the appellation of *Theuth*, *Teutates*, or *Tuisto*, from his worshippers, than that they derived their name from him; and if so, we are still in the dark as to the origin of the name *Teutones*, or the modern *Deutschen.*

Extent and Boundaries.] Germany now comprehends all the States of the German confederacy, which cannot properly be said to form a single State, but rather an offensive and defensive league of States, united under certain laws. It is bounded by the German Ocean, Denmark, and the Baltic on the north; on the east by Western Prussia, Posen, Poland,

Cracovia, Galicia, Hungary, and Illyria; on the south by Istria, the Adriatic, the Lombardo-Venetian States, and Switzerland; and on the west by France and the Netherlands. Its greatest extent from W. to E., or from the most western point of the Prussian dominions on the Meuse below Gennip, to the most eastern point of Silesia, is 610 British miles, or rather more than 14 degrees of longitude, namely, from 5° 50′ to 20° E. long. of Greenwich. If we take it from the mouth of the Ems, to the borders of the Gulf of Dantzic, or the most easterly point of Pomerania, the extent will be 440 British miles. The utmost meridional length of Germany, from the most southern point of the peninsula of Istria, in N. lat. 45°, to the most northern point of the Isle of Rugen, in 54° 40′ N. lat. is 676 British, or 580 geographical miles. But if the extent be taken from the summit of the Brenner, which divides the German from the Italian Tyrol, and where the rivers part to different and distant seas, in 47° N. lat. to the shores of the German Ocean, in 54° N. lat. the length will not exceed 483 British miles. If taken from the southern confines of the bishopric of Trent, in N. lat. 46° to the river Eider, which divides Denmark from Germany, in N. lat. 54° 20′, the length will be 580 British, or 500 geographical miles. The whole superficial contents amount to 11,664 German, or 253,108 British square miles.

General Divisions.] Germany is divided as follows:

	Extent in German square miles.	Population.
1. The German States of the Austrian empire,	3,699.68	9,496,753
2. The German States of the Prussian kingdom,	3,307.36	8,187,220
3. The kingdom of Bavaria, ...	1,453.91	3,513,490
4. The kingdom of Saxony, ...	388.35	1,206,034
5. The kingdom of Hanover, ...	690.29	1,314,124
6. The kingdom of Wirtemberg, ...	348	1,397,451
7. The grand duchy of Baden, ...	272.50	1,001,630
8. The electorate of Hessen-Cassel, ...	204.09	545,208
9. The grand duchy of Hessen-Darmstadt,	193.30	633,026
10. The duchies of Holstein and Lauenberg, belonging to Denmark, ...	173.60	359,985
11. The duchy of Luxemburg, belonging to the kingdom of the Netherlands, ...	110.	214,058
12. The grand duchy of Sachsen-Weimar, . .	66.28	192,371
13. The duchy of Sachsen-Gotha, ...	54.75	182,311
14. The duchy of Sachsen-Meiningen, . . .	18.22	56,269
15. The duchy of Sachsen-Hildburghausen, .	10.97	29,706
16. The duchy of Sachsen-Coburg, ...	23.	80,012
17. The duchy of Brunswick, ...	71.74	209,527
18. The grand duchy of Mecklenburg-Schwerin,	233.88	351,908
19. The grand duchy of Mecklenburg-Strelitz,	36.13	71,769
20. The duchy of Holstein-Oldenburg, . . .	129.	325,349
21. The duchy of Nassau, ...	101.75	302,769
22. The duchy of Anhalt-Dessau, ...	17	52,947
23. The duchy of Anhalt-Bernburg, ...	16	37,046
24. The duchy of Anhalt-Köthen, ...	15	32,454
25. The principality of Schwarzburg-Sondershausen,	18	45,120
26. The principality of Schwarzburg-Rudolstadt,	21	53,940
27. The principality of Hohenzollern-Hechingen,	5.50	14,500
28. The principality of Hohenzollern-Sigmaringen,	20 05	37,032

	Extent in German square miles.	Population.
29. The principality of Liechtenstein, ...	2.50	5,546
30. The principality of Reuss of the Elder Line,	7.	22,255
31. The principality of Reuss of the Younger Line,	21.50	52,205
32. The principality of Lippe-Detmold, . . .	20.62	69,062
33. The principality of Schauenburg-Lippe, .	10.	23,684
34. The principality of Waldeck, ...	21.66	51,877
35. The landgraviate of Hessen-Homburg, . .	6.50	19,823
36. The free town of Frankfort on the Maine, .	5.	47,372
37. The free town of Lubec, ...	5.50	43,127
38. The free town of Bremen, ...	3.50	46,270
39. The free town of Hamburg, ...	6.32	29,739
Total extent and population, ...	11,664.45	30,375,679

The excessive multiplication of petty States, their separate and jarring interests, their different forms of government, and the minute subdivision of territorial property which takes place in Germany—one small State being surrounded by another larger State, and containing within itself one or more smaller States as it were mortised into it—render any attempt to ascertain with exactness the respective population of each State, and the aggregate population of the whole, an impracticable task.[1] An official statement, given in at the Diet in 1818, reckons the total population of the Confederacy, 30,006,896. In the statement which we have given above, no census of any State is of later date than 1818, and some of them are even as old as 1807. Estimating the total population in round numbers at 30,400,000, we may consider it as generally distributed

[1] The data generally employed on the Continent to ascertain the real state of the population are, the number of hearths,—the number of communicants,—births and burials,—and the consumption of provisions. The last is preferred to ascertain the population of large towns. In this way Mr Eton has determined the population of Constantinople, contrary to all expectation, and astonishingly below all former accounts, to be only 300,000. But it is needless to prove that this way of calculating population is very uncertain. The hearths are little better; for before we can infer the population from the number of hearths, we must previously determine how many souls are to be reckoned to one hearth; and this is a matter of extreme uncertainty. Communicants, as to number, will not disentangle the subject, for adults only will be reckoned, and all children of a certain age entirely omitted. Adults best answer the ends of government, as they generally tend to ascertain the number of men capable of bearing arms, and subject to taxation. Hence neither great perfection, nor too much exactness are required; and this may be the very reason, perhaps, why the present accounts of German population are so uncertain and discordant. The births and deaths are in the same predicament with the former; the registers are inaccurately kept, and much is left to conjecture. The number of births and burials differs very considerably in different districts of the same country, and therefore no general rule, respecting the actual population of a large district, or country, can be laid down with certainty from them. Before we can assign the actual proportion of deaths in towns, to their population, and assign the exact difference between the deaths of the town-population and those of the country-population, we must previously know what is the population, whether of the town or the country. In no state has precipitation in determining (says a German journalist) the population of a country, been more apparent than in our country. Our geographical and statistical writers generally reckon the whole population above 30,000,000; but have these writers considered that the very least German States should be numbered, and that even in Germany, in the strictest sense of the word, there are countries still unknown? How then can they prepare and prove their lists? Another circumstance increasing the difficulty, lies in the indefinite use of the term *Germany;* some extending it to Burgundy, Alsace, Lorrain, and the Netherlands; others excluding Bohemia, Silesia, Moravia and Lusatia; and others again, including the last mentioned countries, under that name. Stein reckons the superficial extent of Germany, according to the latest and acknowledged divisions given above, at 11,600 German square miles; Demjan at 11,757; and Crome at 11,679.

at the rate of 2,598 individuals to a German square mile, or nearly 103 to a British square mile. But this average rate of population varies greatly in different States.

CHAP. I.—HISTORY.

Ancient Germany.] Under the name of *Germania*, the Romans comprehended not only the wild country covered with enormous forests, lakes, and morasses, which was bounded by the Danube, the Rhine, the German Ocean, and the Vistula, but also Denmark, Norway, Sweden, Finland, Livonia, and Prussia; for all these countries, forming about one-third of Europe, were inhabited by tribes, whose features, manners, and language, bespoke a common origin. The inhabitants of mild and beautiful Italy could not believe that any people would have left its original settlements, to inhabit the German deserts. "Who," says the incomparable Roman historian, "putting the danger of a turbulent and unknown sea out of the case; who would leave the softer climes of Asia, Africa, or Italy, to fix his abode in Germany? where nature offers nothing but scenes of deformity; where the inclemency of the season never relents; where the land presents a dreary region, without form or culture; and, if we except the affection of a native for his mother-country, without an allurement to make life supportable."[2] They therefore believed them to be an indigenous race, the immediate offspring of the soil, the original natives of the country, without any intermixture of adventitious settlers from other nations. Tacitus, whose treatise on German manners was written A. D. 98, is the first writer who throws any light upon the subject of ancient Germany. His narrative is occasionally obscure, from his sententious brevity; but still it is the most accurate, full, and masterly sketch of this country, and its early inhabitants, of any that we derive from ancient authors.[3]

[2] "This is by no means a satisfactory reason for the position advanced by Tacitus, namely, that the Germans were the indigenous offspring of its soil. In these remote ages, when the numbers of one nation overflowed into another, the object was not the most delightful country, but the safest habitation. Asia Italy, and some parts of Africa, afforded delightful spots; but to men who could not find a settlement in these regions, even Germany, which appears so horrid to Tacitus, was not without its conveniences. The people escaped from oriental despotism, and lived in freedom. 'A freehold,' says Addison, 'though it be but in ice and snow, will make the owner pleased with the possession, and stout in the defence of it.'"—*Murphy's Notes on Tacitus.*

[3] The Germany of Tacitus, as already mentioned, was of vast extent, reaching from the west of the Rhine to the Gulf of Finland on the east; and from the Danube, which parted it from the Roman provinces of Rhætia, Vindelicia, and Noricum, on the south, to the Danish Islands in the Baltic, on the north. To enumerate the numerous tribes mentioned by Tacitus, and to assign them their relative geographical positions, and ascertain what parts of modern Germany they were inhabitants of, would be an arduous task; a task as difficult as that of fixing the settlements of the migrating hordes who wander on the shores of the Caspian, and the Aral, or roam in the deserts of central Asia. The learned Cluverius has been the most successful in elucidating the text of Tacitus, and disembroiling this troubled subject. In this labour he has been followed by Cellarius and D'Anville, and does not deserve the scurrilous epithets bestowed on him by Pinkerton. At the time when Cluverius wrote his *Germania Antiqua*, the science of Geography was but in its infancy, and he had not the aids that fall to the lot of modern geographers. These circumstances ought to be kept in view, and liberal allowance should be made in behalf of men who, though possessed of immense erudition, and laborious diligence, could not reasonably be expected, from their comparative want of science, to treat the subject of ancient geography, and to identify the seats of vagrant tribes, with such luminous precision and strict accuracy, as their successors, D'Anville, Rennel, and Gosselin. Gibbon himself has paid a just tribute of praise to the learned labours of Cluverius; and Pinkerton might have contented himself with pointing out his errors, without abusing him.

In the countries beyond the Rhine lived a nation with sparkling blue eyes and fair hair; of great bodily powers and gigantic size; capable of supporting the extremes of cold and hunger, but impatient under heat and thirst; of warlike dispositions; honest, faithful, kind, and without suspicion towards their friends, but implacable towards their enemies; spurning constraint of every kind; esteeming independence the most noble possession which man can inherit, and ready at all times to renounce life, rather than freedom. Ignorant of all the finer arts of life; unacquainted with agriculture, or the use of metals; and destitute of written characters,—the Germans supported themselves in a country full of woods and pastures, by hunting and the rearing of cattle; and divided their life between indolent repose and the pleasures of the chase. In time of peace, the warrior gave himself up to sleep and inactivity, waiting impatiently the moment when war should again call him to more manly occupations. They were fond of gambling and drinking to excess. A beverage prepared of wheat and barley formed a substitute for wine; and far from being ashamed of intoxication, they believed their virtues exalted, and their intelligence sharpened by it. It was when in this state that they held their public councils; and the resolutions taken when inebriated were considered as the dictates of inspiration, and invariably carried into execution.

The form of government was democratic in the greatest part of Germany. It was only on the shores of the Baltic that some tribes acknowledged the authority of kings, without, however, giving up the rights belonging to them as free citizens of the State. Reciprocal defence being the tie by which the Germans were kept together, they soon felt the necessity of submitting individual opinion to the will of the majority of the confederates; and this rough outline of political society was sufficient for a nation which as yet was ignorant of higher ambition. The youth born of free parents were introduced into the assemblies when of age, and received as members of a free and independent State. The assemblies of all the men of a tribe able to bear arms were convened at fixed times, or upon any occasion of sudden emergency. In these popular assemblies, the decisions for war or peace were given, the magistrates elected, and the offenders against the laws of society punished. A popular majority always decided; for although the right of previous consultation was allowed the chiefs, the people alone were invested with the power of forming resolutions, and of executing them. In times of danger, a general chief was elected; and in cases where united strength was required, several tribes submitted to one chief, whose authority ceased with the emergency which required it. In the time of peace, no other authority was acknowledged than that of the chiefs elected in the assemblies, and who, as republican magistrates, each one in his district, administered justice, and settled disputes. The chief or prince had a body-guard, and was assisted by a council of one hundred individuals; but although the Romans gave to some of them the title of *king*, they had not the right of inflicting the punishment of death, or of imprisonment, or any kind of bodily punishment, on a free man.[4]

In a nation so much attached to freedom and independence, every kind of warlike virtue was of course considered as the ornament of man; chastity was that of woman. Polygamy was only allowed to the princes;

[4] "In the manners of the Germans, the reader will see our present frame of government, as it were, in the cradle,—gentis cunabula nostræ!"—*Murphy's Notes on Tacitus.*

divorce prevented rather by custom than by law. The religious ideas of a nation like this would of course be rude in the extreme. The sun and moon, the fire and earth, were the divinities whom they worshipped, together with certain imaginary beings, to whom they ascribed the direction of the principal events in human life, and whose will the priests pretended to ascertain by secret arts of divination. Their temples were caves in the rocks, consecrated by the worship of successive generations. The ordeals so celebrated in the middle ages, were employed by the early Germans to direct their decision in every important case. Religion also furnished the strongest means of exciting their warlike spirit. The banners, kept in the darkness of their sacred caves, were planted on the field of battle, and their enemies were devoted, by the most tremendous imprecations, to the gods of war and of thunder. The brave alone were promised the favour of the gods,—a warlike life, and death in battle being considered the surest means of obtaining the joys of Walhalla, the paradise of the northern nations. It is a question not yet entirely decided, if the northern or Scandinavian mythology, of which we have given a short account in our history of the northern kingdoms, was originally the same with that of the Germans; but at all events, the Scandinavians and the Germans are of kindred origin, and this much at least is clear, that several German tribes who crossed the Rhine, were followed by other tribes from the north and east, and that the Goths and Saxons brought their mythology to Germany. We find in the German mythology the same gods as in the Scandinavian: Odin, or Woden, the first and oldest of all the gods, and Frigga, or Frega, his wife, and Thor, the god of thunder; and many others, whose history would lead us too far from our subject, occur in both mythologies. Besides these general divinities, the Germans had also some worshipped only by particular tribes.

All inquiries into the origin of the Germans lead us back to Asia, the general cradle of the human race, although we find only very faint traces in the ancient historians of the emigrations of Asiatic tribes to Germany. Before the Scythians were driven by the Massagetæ from the shores of the Pontus Euxinus, the Cimmerians, a nation kindred to the Germans, occupied the Crimea, and European Tartary. This latter tribe, pressed upon the Vistula by the Scythians, united there with the Teutonic tribes, of whom we have no historical records. From this region Scandinavia and Germany were peopled; and hence the tradition among the inhabitants of those countries, that their ancestors once lived upon the banks of the Vistula. We find three principal German tribes: Istavonians, Ingavonians, and Hermionians. These were subdivided into a number of smaller tribes: as Celtes or Keltes, Cheruscans, Frises, &c. The Hermionians, who lived between the Elbe and Vistula, were the chief tribe, and were also known by the names of Teutonians, and Semnonians. From them it appears, the Istavonians had wandered to the west, and the Ingavonians to the north. The Romans first became acquainted with the Germans in the year 640 of Rome, about 111 years before the Christian era, when a wild tribe, calling themselves Cimbri, appeared on the Alps, defeated the consul Papirius Carbo, and then turned against the Allobroges, whom they subdued in two great battles. They then, in conjunction with the Teutones, invaded Gallia Transalpina; and after winning several other victories, turned to Italy,—the Teutones attempting to cross the western, and the Cimbri and Ambrones the northern Alps. Marius saved Rome on this occasion by defeating the former at the foot

of the Alps, near the place then called Aquæ Sextiæ, now Aix in Provence, in the year of Rome 651, when, according to Livy, 200,000 of the enemy were slain. The Cimbri, in the meantime, had penetrated as far as the Adige, and having crossed that river, spread a general panic through the country; but they too were defeated by Marius at a place called Raudium, and above 140,000 of their number fell in the engagement.[5] The remains of these tribes retired partly into Gaul, and partly returned to the banks of the Danube. When Cæsar had subdued the Gauls, and carried his victorious arms to the Rhine, he found a nation called Germans, whose leader, Ariovistus, intended to settle in Gaul, but was defeated by the Roman general, and obliged to retreat over the Rhine. Cæsar crossed the Rhine twice, but only with the view of protecting the Gauls from future invasions of these barbarians. The civil wars of Rome afterwards turned the attention of its generals from Germany; and the German tribes during the interval, made various inroads into Gaul. Augustus built a chain of fortresses on the Rhine to repel these invaders. Tiberius, who commanded here in the year of Rome 745, induced numbers of the Germans to accept of service in the Roman armies. Augustus's body-guard was composed of Germans; and Arminius, a chief of the Cherusci, rose in it to the dignity of an Eques, or knight. In the year of Rome 756, Tiberius advanced to the Elbe, and would perhaps have succeeded in making the whole of Germany a Roman province, if the violent measures of his successor Varus, who attempted to change the manners and constitution of the German tribes, had not destroyed all the advantages which his predecessor had obtained. A general conspiracy, at the head of which stood Arminius, was formed against the Romans, and Varus, with his army of three legions, having been enticed into the forest of Teutoburg, was cut off, and the Roman power annihilated in Germany. The Romans made another attempt under Germanicus to regain their former footing in this country; but as it also failed, they attempted the regular conquest of the country. From this period, we see the different German tribes greatly distracted in their government,—some of them for a while allied to the Romans, and then turning their arms against them,—others maintaining a perpetual struggle against the Roman domination, and all of them more or less at war amongst themselves. One of the most important in this series of conflicts, was that which the Marcomannians, Quadians, and Hermundurians, carried on with united forces against Marcus Aurelius. About the same period, the Celtes invaded Gaul and Rhætia; and the Cherusci pressed the Longobards, the ancestors of the warlike Lombards, back to the Elbe, and now warred under the name of Franks. New tribes of barbarians appeared A.D. 220 in Dacia; the Visigoths, Gepedæ, and Herulians, pressed upon the Romans; and under the emperor Caracalla, a new confederation sprung up in the south of Germany, under the name of Allmanni, importing that it was the league of a brave people, 'all men,'—*omnes viri*. It was against this league of Istavonian tribes that the Romans built the

[5] "The number of the Cimbri, and their confederates the Teutones, said to have been destroyed by Marius in his two engagements, would seem incredible, were it not in some degree explained by Florus, who says, that the whole nation was driven by inundations of the sea, to seek new habitations in every quarter of the globe. Their native country, after this emigration, continued so depopulated, that at the end of two centuries, when Tacitus wrote his Treatise, it had not been able to recover itself. It was long after that the Angles and Saxons issued from their northern hive, as Sir William Semple calls it, to establish their Anglo-Saxon government in Britain."—*Murphy's Notes on Tacitus.*

celebrated *Valla Romanorum*, of which the remains are yet visible between Saxhausen and Oehringen. The power of the Romans was now rapidly declining under the united influence of foreign invasion and civil war. The Franks penetrated into Spain, and, under the emperor Probus, conquered all the Batavian provinces. The Franks and Alemanni were now the two most powerful German nations; the former, however, had their Batavian possessions wrested from them by the Saxons, and the latter were defeated by the Romans. But this was the last victory of Rome. In the beginning of the 5th century, the empire was assailed from all sides by the barbarian hordes; and those remarkable migrations began, which poured the people of the North and East like a flood over Europe and for a while seemed to obliterate every trace of ancient civilization.

Migration of the Northern Nations.] The migration of the Northern tribes is generally dated from the period when the powerful Huns set out for Europe, viz. A. D. 375; but the fact ought not to be forgotten, that a perpetual movement among the Nomade tribes, inhabiting the Asiatic steppes, is to be traced up to the most ancient epochs of history, and that, from the earliest times, these people made various inroads from the East. No migration, however, from the great 'Storehouse of Nations,' was attended with such important consequences to Europe, as that of the Huns. This ugly Calmuck tribe, distinguished by broad muscular shoulders, a black yellow complexion, an almost concave forehead, small deep-sunk eyes, long black hair, a flat nose, little or no beard, a short neck, wide chest, and a thin spare body, seems to have had a distinct origin from the neighbouring tribes, and had wandered about for near three centuries in the steppes of Western Toorkistaun. From the Chinese annals we learn, that the Huns were driven from Mongolia and Cashgar to the N. and N.W. of Cashgar, by the Chinese, and the Sienpi, an oriental tribe, about A. D. 93. In the year 374, they crossed the Volga and the Don, and having united with the Nomades in these regions, threw themselves upon the territory of the Alans at the Tanais. The Alans —under which name all the tribes between the Volga, the Caspian Sea, the Caucasus, the Don, and the Dnieper, were frequently comprehended— were unable to resist the attack of the Huns; part of them retired to the Caucasus, A. D. 375; another part joined the German tribes; and another amalgamated with the Huns. The barbarian mass, thus swollen into irresistible weight, overwhelmed the Ostrogoths at the Don, and produced those remarkable convulsions in the Byzantine empire in which Valens lost his life.

Whether the Goths—as is generally believed—were originally located beyond the Baltic, in the extreme north, whence they approached the mouth of the Vistula, and afterwards spread along the right banks of that river into Poland, is a question not easily to be determined. They are mentioned as appearing first under Caracalla, about A. D. 215, on the left bank of the Danube. Between 249 and 269, they not only invaded the Roman countries on the Danube, and Greece, but even attacked, with their fleets, the towns upon the Pontus Euxinus. Here they probably mingled with other tribes, and this mighty empire, founded by Ermanarik, extended from the Don to the extreme north, including several Slavonish, Finnish, and Celtic tribes. In 367, the empira of the Goths was divided into two parts: the kingdom of the Ostrogoths at the Black Sea, and that of the Visigoths in Dacia.

The first shock of the united Huns and Alans fell upon the Ostrogoths, who retired upon the Dniester. The Visigoths, attacked in their

turn, entered the empire of Byzantium, on which occasion Valens was killed. Alaric, king of the Visigoths, invaded Italy in 400, and after a variety of fortune, took and pillaged Rome in 409. In 444 Attila, king of the Huns, who called himself 'the Scourge of God,' terrified all nations and kingdoms, from the boundaries of China to the Rhine. Chief of the Gepidæ, Longobards, Avarians, Ostrogoths, and many other tribes in Southern Germany, he advanced from the Danube at the head of 200,000 men, to enforce his claim to the hand of Honoria, the sister of Valentinian III. Ætius, with an army strengthened by Visigoths, Franks, Saxons, Alans, and other German tribes, awaited the approach of this powerful conqueror, who advanced, desolating the country between the Rhine, the Meuse, and the Seine, and reached Orleans before the united forces of the Romans and their allies defeated him at Chalons, in 451, and forced him to hasten back to Pannonia. The subversion of the Roman empire in the west, by Genserick, the king of the Vandals, took place in 455. Augustulus, the last of the emperors of the Occident, was, in 476, seized at Ravenna, by Odoacer, the chief of the German auxiliaries, who sent him, as a State-prisoner, into Campania, and became himself *de facto* king of Italy. Odoacer, however, did not assume the purple on this occasion, but placed himself under the protection of the Byzantine emperors. Fourteen years afterwards, he was conquered by Theodoric, who, with the consent of the Greek emperor Zeno, went to Italy with his Ostrogoths, where he founded the empire of the Ostrogoths.

With the destruction of the Roman empire in the west, a new order of things commenced, and a new social constitution was introduced into Europe, which, in its innumerable forms and modifications, appears amongst us in the present day. The epoch in which the dissolution of the Roman empire in the west and south of Europe took place, and the new kingdoms and political constitutions of Europe were gradually formed and modified by the operation of the feudal system and the Christian religion, is called the *Middle ages*, and extends from A.D. 476, to the discovery of America, in 1492.

German Nations.] About this period, and after so many remarkable revolutions, we find the following principal tribes remaining in Germany: The Saxons, on the Elbe, between the Baltic and the German Ocean, divided into Eastphalians and Westphalians, some hordes of whom went, in 499, to Great Britain, where they founded the Saxon Heptarchy. Allied to them were the Frises, on the coast of the German Ocean, from the mouth of the Scheldt to the Elbe. The Thuringians founded a kingdom between the Harz, the Rhine, and Bohemia, about the year 426, which was destroyed in 528, under their last king, Hermanfiord, by the Franks and Saxons. The Alemans, or Alemanni, a powerful league of several tribes, lived between the Upper Rhine and the Maine, at the Neckar, and between the Lech and the Danube. The Bavarians, separated by the Lech from the Alemans, extended from the Under Danube to the Ens; and the Longobards, who first lived in the district of Luneburg, turning to the south at the departure of the Ostrogoths for Italy, had taken up their abode in Pannonia, in 548, whence they went, in 568, to Italy.

The East of Europe was occupied in the middle ages by Slavonian tribes, of whose origin, as well as of the time when they came from Asia, we find no records in history. They extended from the Don to

the Elbe, and from the Baltic to the Adriatic, and were divided into several tribes, whose common language, constitution, religion, and manners, evinced a kindred origin. The Slavonians are first mentioned in history at that period when they came into warlike contact with the German tribes; but since that time, with a very trifling exception, the Elbe has remained the boundary between the German and Slavonian tribes.

The German tribe of the Franks, during the last storms which convulsed the Roman empire, were located at the middle Rhine. Childeric led this tribe to the Lower Rhine. He was succeeded in 481, by his son, Chlodowig, who destroyed the last of the Roman forces in Gallia, by the victory of Soissons, in 486, and founded the empire of the Franks in Gaul. In 491, Chlodowig subdued the Thuringians and Alemans. Having taken possession of their territory upon the Rhine, he was baptized in 496, and died at Paris in 511.

Merovingian Dynasty.] Under his successors, the Merovingians, the empire of the Franks fell into decay, and only rose again in 687, when the dignity of *Major Domo* became hereditary in the family of Pipin of Herstal, in the three kingdoms into which it had been divided, viz. Austria, Neustria, and Burgundy. Three men of decided talents for war and government succeeded each other in this family: viz. Pipin of Herstal, Charles Martel, and Pipin the Short. Under Pipin of Herstal, the Alemanni, Bavarians, and Frises, were subdued. Charles Martel, in 714, again taught the Alemanni, Bavarians, Frises, and Saxons, the superior power of the Franks. The last Merovingian king, Childeric III., was dethroned by a Diet held at Soissons, in 752, and compelled to retire into a convent. On this occasion, Pipin was raised to the throne by the election of the people and the nobles; and he and his two sons, Charles and Carloman, were anointed by Pope Stephen II. Pipin died on the 24th September, 768.

Carlovingian Dynasty.] Immediately after his father's death, Charles mounted the throne of Austria; the death of his brother, Carloman, in 771, gave him also the possession of that of Neustria, to which he was elected by the people in preference to his nephews, who thereupon retired with their mother, a Longobardian princess, to the court of Desiderius, king of the Longobards, where several discontented Franks had assembled.

One great plan runs through the whole policy of Charlemagne's reign of 46 years,—his design, namely, to unite all the nations of German origin into one great political body, under one chief,—to re-establish their preponderance, in this manner, over the neighbouring States,—to civilize them by the introduction of sciences and arts,—and by abolishing the power of the independent dukes, to unite all the branches of the government in his own person.

In 772, Charlemagne began the war against the Saxons, who had so long struggled with his predecessors. The national hatred of the Franks and Saxons had existed for centuries; and Charlemagne aimed at breaking at once and for ever the power of the Saxons, and securing his advantage by the introduction of Christianity. But it cost this conqueror a struggle of thirty years to tame the spirit, and overturn the power, of that gallant people.

His arms obtained an easier victory over the Longobards. Having crossed the Alps, in 774, he besieged Desiderius in his own capital of Pavia, which surrendered to him; and Desiderius dying shortly after this event, in a convent, the Longobards swore allegiance to his con-

queror, who united his Crown with that of the Franks, but left the Longobards in the unmolested possession of their own constitution and laws. He confirmed to Pope Hadrian, in 774, the donation made by his father, Pipen; and, in 778, conquered Spain, as far as the Ebro, and gave to this district the name of the *Spanish March.*

During the war with the Saxons, their chief, Wittekind, was compelled to receive baptism in 785; but, so hostile were the people in general to the dominion of the Franks, and to the tithes they were directed to pay the clergy, that they maintained a perpetual struggle with their conquerors, till 803, when at last a peace was concluded upon the conditions that the Saxons and Franks were to form one nation, with equal laws and rights, and that all were to be baptized, and to remain equally exempt from every tribute, except the payment of tithes to the clergy. Before this period, duke Tarsilo of Bavaria, who had entered into an alliance with the Avares, having been subjected in 788, was sent to a convent, and the dignity of duke abolished in Bavaria, which was thenceforth placed under the administration of counts. The Avares were likewise subdued, and their country, from the confluence of the Raab with the Danube, united with Germany, in 796, under the name of the *East March.* The Slavonians on the Baltic, on the right banks of the Elbe, and in Bohemia, were likewise conquered, and some of them made tributary; their lands, however, were not annexed to Germany, for Charlemagne intended to make the Elbe the natural eastern limits of that country. In the latter years of his life, having to resist the Normans, who came as pirates from the coasts of Jutland, he fortified the boundaries of his empire at the Eider.

Pope Leo III. having called Charlemagne to his aid in putting down the rebellion of some powerful Roman nobles, he went to Rome. At this period, the Grecian emperors still claimed the imperatorship of Rome, of which Charles, as *Patricius,* was the protector. After having reinstated Pope Leo, he celebrated Christmas in the church of St Peter; on which occasion, while kneeling at the alter, Pope Leo placed the imperial crown on his head, and the assembled people proclaimed him emperor. Thus the imperial dignity, which had lain in abeyance since 476, was revived in the person of Charlemagne—the first German prince who wore the Roman diadem. After this event, he dropped the title of *Patricius,* and the court of Byzantium acknowledged him in his new dignity. The empire of Charlemagne thus extended from the Tiber to the Eider, from the Ebro in Spain to the German Ocean, and from the Atlantic to the Elbe and the river Raab in Hungary.

Charlemagne was not a mere statesman and a soldier: he united to his high talents in these characters, a genuine love of the liberal sciences and arts, and did every thing in his power to promote their cultivation in his dominions. He founded several bishoprics, and endowed numerous convents as places of education. Men of learning and science were appointed to these prebends, not as idle sinecures, but as a reward for their activity, and as affording them an ampler field for the exercise of talents so useful to their fellow-citizens. With the same view, he founded an academy, of which he was himself a member, and at the head of which he placed the celebrated Alcuin, with whom, however peculiar his taste, no contemporary Byzantine author can be compared. At Charlemagne's court there lived, besides various other celebrated scholars, Egin-

hard[6] the secretary and biographer of the Emperor, Paulinus of Aquilega, Theodolphus, and the Longobard, Paul Warnefried, who has left us a collection of Latin sermons, and some historical works. It is true, that the whole circle of philosophical knowledge then lay within the narrow boundaries of the *Trivium*, by which was meant the three sciences of music, arithmetic, and geometry, and the *Quadrivium*, which included grammar, dialectics, rhetoric, and astronomy; but in those times, when the civilization of a rude and barbarous nation was attended with so great difficulties, what Charlemagne attempted and actually effected, cannot be valued too highly. He likewise brought the clergy under a better discipline; and to satisfy himself, that the *Grafen* or counts—the judges appointed by him—performed their duties faithfully, and administered the law justly, he sent from time to time, royal commissioners into the different provinces of his empire, with power to inquire into, and report upon the conduct of the governors and the clergy,—to receive any complaints which might be preferred against them,—and generally, to communicate to the king a true report of the situation of the respective provinces. Charlemagne allowed the German tribes to use their own laws; and promulgated various new laws adapted to the spirit of the time, which were called *capitularii.*

A hand capable of wielding the reins of government, with equal or even superior energy, was required after Charlemagne's death, to keep together the vast empire which he had formed; but the only one of his sons who survived him, Louis le debonnaire, though good natured and highly devout, possessed none of the great qualities of his father. In 817, he divided the empire between his three sons, Lothar, Pipin, and Louis; but having afterwards by a second marriage a fourth son, Charles the Bald, he was prevailed upon by his wife to alter the first division in favour of his youngest son. This occasioned, in 829, a rebellion on the part of the elder sons against their father, which was several times renewed, and in the course of which he became more than once their prisoner. Previous, however, to his own death in 840, his son Pipin died; whereupon, as Lothar and Charles intended to reject their brother Louis' claim at the division of the empire, he made war against them. This civil dissension was accommodated by the celebrated treaty of Verdun, concluded in August 843, by which Lothar, as emperor, obtained Italy and Lorraine,—Charles, France properly so called,—and Louis, all Germany, on the right side of the Rhine, and the towns of Mentz, Worms, and Spires, with their respective territories on the banks of that river. Thus Germany became, by this treaty, an independent kingdom, separated from the rest of the monarchy of the Franks.

Louis—now called Louis the German—maintained a hard struggle, from 876, with the Slavonians and Normans. To protect the boundaries

[6] Eginhard, who died in 839, had so endeared himself to Charles by his talents and his love of science, that the emperor gave him his daughter in marriage, and the love of the illustrious pair has formed the subject of several romances and ballads. Eginhard is the most ancient German historian. The life of Charlemagne, written by him with great detail, and in a good style, was printed in 1711. Eginhard's Annals of France, from 741, to 829, were newly edited at Utrecht, in 1171. There are existing several letters of his, of which an edition was published at Frankfort, in 1714. A plan is ascribed to him to unite the German Ocean with the Mediterranean and the Black Sea, by two canals, of which one was to effect a communication between the Moselle and Saone, and the other between the Rhine and Danube.

of his kingdom, he established *Markgrafen*, or lords of the marches; he also granted permission to his more powerful vassals, to build strong castles in the midst of their possessions; but the more rapidly the number of these castles increased, the more dangerous they became for the German kings, as they promoted the independence and pride of the chiefs, and enabled them to maintain their private feuds, and set the public law at defiance for centuries. After Louis' death, in 826, his three sons, Carloman, Louis the younger, and Charles le Gros, having divided the kingdom into three parts: viz. Bavaria, Franconia, and Alemannia, were attacked by their uncle Charles the Bald. Carloman died in 880, and Louis in 882, after the first had been elected king of Italy, whereupon Charles—who succeeded him in this dignity—united all the German countries, and was also recognised as king of France. But Charlemagne's spirit rested not upon him, and the German nation, in 887, took the crown from him, and elected Arnulph of Carinthia, an illegitimate son of Carloman, king of Germany. His reign was a scene of constant warfare. After his death in 899, his son, Louis the child—then only six years of age—was elected king by the Germans. Under his reign, the wealthy vassals began to grow more and more powerful, and Germany suffered by the invasion of the Hungarians. With Louis, who died on the 24th September, 911, the Carlovingian race was extinguished in Germany; and Conrad I., one of the counts of eastern Franconia, having been elected king, Germany, from this period, remained an elective empire. Conrad's short reign, from 911 to 919, was stormy; but before his death, he magnanimously urged the election of duke Henry of Saxony, the most powerful and gallant of the German princes, although he had always been his personal enemy.

House of Saxony.] With Henry I. begun the house of Saxony in Germany. He was successful in his wars against the Hungarians, and other external enemies of the State, and successfully curbed the ambitious vassals; he also endeavoured to induce the Germans to live in towns—a mode of life to which they were very adverse—by granting considerable privileges to the cities. He was succeeded in 936, by his son Otto I., under whose reign, the form of the German State gained more and more consistency. Saxony, Bavaria, Franconia, Suabia, Lorraine, and Thuringia, were at this period the German dukedoms. The markgraves of Misnia and Austria now began to gain greater authority; and the *Ratzgrafen*, or palatines, a title given to the inspectors of the royal castles, and the *Burgrafen*, or commanders of the strong castles, had lands assigned to them for their services.

Otto was, in 951, crowned king of Lombardy; at Pavia, in 961, king of Italy, by the archbishop of Milan; and on the 2d February 962, he received the imperial crown at Rome from the hands of pope John XII. The union with Italy shed a ray of Italian civilization over Germany; but the constant civil contentions of the former country deprived it of its most noble youth, and the whole fate of the latter country might perhaps have taken another direction, and the Roman bishop never have obtained so much influence over Germany, if Otto had avoided this union with Italy at a period when the Germans were so much hated and feared. The reign of Otto II. from 973, to 983, witnessed an unceasing conflict in Germany and Italy. His son Otto III. would probably have transported his residence to Italy, having been crowned emperor at Rome in 996, and being fond of that country and its civilization; but he

died young on the 24th of January, 1002, having been poisoned, it is suspected, by an Italian lady. With him the house of Saxony ceased to occupy the imperial throne.

Henry of Bavaria, and Conrad II.] Duke Henry of Bavaria was elected in 1002, and died in 1024, after a stormy reign, without leaving a male heir, whereupon the Germans placed the Franconian duke, Conrad II. on the throne. His reign was distinguished by an energetic and successful government. He regained Italy, and was crowned in 1027 at Rome.—Conrad's new constitution, promulgated at Milan on the 28th of May, 1037, established the hereditary succession of the smaller fiefs or estates of the vassals in the male line; a measure which led the way to the hereditary succession of the larger fiefs or ducal dignities.

Henry III.] Henry III., Conrad's son, succeeded his father in 1039. He supported vigorously the imperial rights in the nomination to the See of Rome. Three popes, contending one against another, were deposed by him; and three times he appointed German bishops to the papal see.

Henry IV.] Henry III. died too early for his great plans, and during the minority of his son Henry IV., matters assumed a quite different aspect. Upon the education and wavering character of the young prince, Bishop Adelbert of Bremen had exercised great influence; and the foundation of the clerical hierarchy in his reign, was an important result of that training. Pope Nicholas II., in 1059, in a council held at Rome, had declared that the right of electing to the popedom, was vested exclusively in the 7 cardinal bishops of Rome, and the 28 cardinal priests. Nicholas attempted at the same time farther to invade the royal prerogatives, by giving the investiture of Capua, Calabria, Apulia, and Sicily, to the Norman princes of Lower Italy, by which policy he attached them to the Roman see. Gregory VII. accomplished what Nicholas had begun. He even maintained, that the German empire, as well as every other Christian realm, were tributary fiefs of the see of Rome, and that the pope was lord paramount of his vassal the emperor! In consistency with these doctrines, when the discontented Saxons complained of Henry at Rome, Gregory summoned the king before him, threatening him at the same time with the anathema if he refused to obey. Henry I., the son of an emperor, by whom three popes had been deposed, answered this insolence by deposing Gregory; whereupon the latter pronounced the anathema, relieving the Germans from their allegiance to him, in 1076. Hated and forsaken by his German vassals, Henry was now obliged to go to Italy, and after an abject penance of three days at Canossa, where Gregory was then on a visit to the countess Matilda, he obtained absolution from his hands, but upon conditions so revolting, that Henry shortly afterwards declared them null and void, as having been forced upon him. Gregory now attempted to elevate duke Rudolph of Suabia to the German throne; but the duke was deadly wounded in the third battle with Henry. A council of German bishops held at Brixen, in 1080, now deposed the pope, and elected Clement III. whom Henry conducted to Italy; whereupon Gregory fled to Salerno, where he died in exile, in 1085. Two new popes were successively opposed to Clement: the latter of whom, Urban II., excited Henry's son, Conrad, to rebellion against his father, who thereupon named his younger son, Henry, his successor. But he also was induced by pope Pascalis II. to take up arms against his father, whom he made prisoner,

and forced to renounce the Crown in 1105. The father, however, soon afterwards escaped, and collected an army at Liege, with which, in 1106, he hastened to punish his ungrateful son; but death surprised him on the 7th August, 1106, and so great was the influence of the Roman college, that even his corpse remained five years above the earth in a coffin of stone, —as one lying under the special curse of the Church—before it was allowed to be buried in the imperial vault at Spires.

Henry V.] Henry V. had in his time a dispute with the pope about the inheritance of the countess Matilda. Shortly before his death, however, the dispute, respecting the right of inheritance, was settled between him and Calixt II. by the concordat of Worms, in which it was fixed that every bishop should be elected freely, and without the co-operation of the emperor; and after the election should receive the investiture of the regalities from the hands of the emperor, by the symbol of the sceptre, in place of the ring and staff formerly used, which ceremony should be followed by the confirmation of the pope. This arrangement, however, was soon departed from; already under Henry's successor, the imperial investiture was only given after the papal confirmation, and consequently became a mere ceremony, while the influence of the pope over the clergy in Germany gained more and more strength every day.

The Crusades.] The warlike spirit of the German nobility, under Henry IV., had probably as much influence as the religious spirit of the times, in exciting the Crusades. These expeditions, however, suggested though they doubtless were by a fanatic and misguided zeal, had nevertheless a very great influence on the civilization of Europe, the extension of commerce between the East and West, and the developement of a better political constitution in different States. The knights who lost their fortunes in these wars, were induced to repair their revenues by allowing their numerous bondsmen to purchase their freedom; while the recital of the adventures and deeds performed in the East, spread the spirit of chivalry in Spain, France, and Germany, and gave birth to the songs and poetry of the Troubadours and Minnesangers, who came from France to the south of Germany.—Three orders of knighthood were formed during the Crusades: viz. the order of St John, in 1118; the order of the Templars, in 1118, and the Teutonic order, in 1190. The knights of St John wandered after the loss of Palestine to Cyprus and Rhodes, and at last established themselves in Malta, in 1530. The Templars were abolished by the selfish policy of king Philip of France, in 1314. The Teutonic knights—an order more particularly belonging to Germany—went after the loss of Palestine to Prussia, where they converted the Prussians to Christianity by means of the sword, and obtained a settlement in that country till the time of the Reformation, when their seat was transferred in 1525, to Mergentheim, and in the year 1809, this order was abolished throughout all the German States.

Luthar II.] Henry V., was succeeded by Luthar II., duke of Saxony, who was elected by the nation. His reign too was an almost continual warfare. Germany underwent a great change in his time, in its constitution and geographical division. The Great German fiefs—the dukedoms namely, and margraviats—became hereditary in the families then possessed of them; and since that time, the names of duke, and markgrave, were no longer designatory of an office for life, but denoted the hereditary possession of a fief of the empire. Gradually, the holders of the smaller fiefs were placed in the same relation towards

the dukes, as they themselves stood in towards the emperor, and the possessors of castles and estates took the names of their fiefs. By this, and by the complete separation of the property of the laity and clergy, the name and the former limits of the German *gaus*, or districts, were changed; and the towns also gained in population and wealth.

House of Hohenstaufen.] After Lothar's death, Conrad of Hohenstaufen, Duke of Franconia, was elected king in 1138. He was engaged in many struggles with his rebellious vassals, particularly against Duke Henry of Bavaria and Saxony, who would not acknowledge him as king, upon which Conrad required him to give up one of his dukedoms, as the German constitution did not admit of one and the same individual enjoying the possession of two ducal fiefs. Henry refusing the demand, was placed under the ban of the empire, and declared to have forfeited both his dukedoms; that of Saxony was given to the markgrave of Brandenburg, Albert the Bear; and Bavaria, to markgrave Leopold of Austria. But, Welph, or Guelph, Henry's brother, vigorously defended the rights of the family to which he had given his name; and after Henry's death, his minor son, Henry the Lion, got again the dukedom of Saxony. Bavaria was given to Henry, brother of Leopold of Austria, after the death of that prince.—Conrad wisely avoided meddling with the contests then going on in Italy, but he could not resist the temptation to undertake a crusade, and died two years after his return from Palestine, in 1152.

He was succeeded by his nephew, Duke Frederic of Suabia. Supported by Henry the Lion, Frederic I. conquered the Lombards, and entered Milan in 1162. But scarcely had he returned to Germany, when the feelings of independence and freedom, and the hatred of the German dominion arose again in the Lombardian States, and the fortune of war seemed to declare against the emperor, particularly when Henry the Lion, in 1175, returned to Germany against the will of the former, who in consequence of this laid Henry under the imperial ban, and declared him to have forfeited all his lands. Bernhard of Ascania obtained Saxony, and Otto of Wittelsbach, Bavaria. Henry kept nothing but his allodial property in Brunswick. However, the struggle between the Guelphic house and that of Hohenstaufen—Guelphs and Ghibellins—continued for several centuries in Germany and Italy under very different political interests. In Italy, Frederic obtained the succession of Naples and Sicily for his family, by the marriage of his son Henry with the Norman princess Constantia, in 1186. But this union, calculated for the political aggrandizement of the house of Hohenstaufen, eighty years afterwards proved itself the cause of its ruin. Frederic resolved to undertake a crusade when almost 70 years of age; but was drowned in attempting to cross the river Calycadmus on horseback. His gallant son, the Duke Frederic, conducted the army to Accon, where he founded the above-mentioned order of the Teutonic Knights, but soon afterwards fell a victim to the diseases raging in the army.

Henry VI. succeeded his father, whose ambition, but not his spirit and his virtues, he inherited. His short reign, from 1190 to 1197, was marked by a renewed war against Henry the Lion, who had found new partisans; and by the arbitrary imprisonment of Richard, Cœur de Lion, king of England, who, in his return from Palestine, was by a storm thrown upon the Italian coast, and given up to the emperor by his enemy, Duke Leopold of Austria. Henry's plan to make the German crown hereditary in his family—for which he promised, on the other hand, to admit female

descendants to the succession, to the fiefs of the empire, when no male heirs were existing—was stoutly resisted by several German States. He obtained possession of the Sicilian inheritance in 1194, but ruled in Naples and Sicily with a cruelty which entailed eternal ignominy upon his name, and irritated his new subjects against him to the utmost. He died in 1197, not without suspicion of having been poisoned by his wife.

During the minority of his son Frederic II., the heir of Sicily, who, in the lifetime of his father had been named his successor in Germany, Pope Innocent III., got possession of the city of Rome and the duchy of Spolito. In Germany the two parties fought under two kings, Philip of Suabia, Frederic's uncle, and Otto IV., son of Henry the Lion. The first having been murdered, Otto reigned alone; but on his requiring Pope Innocent to restore Spolito, the Pope opposed to him Frederic II. as Emperor. After Otto's death, Frederic caused his own son, Henry VII. to be elected his successor in Germany, in 1220, but was obliged to depose him in 1235. The Pope, to whose machinations he owed the rebellion of his son, even forced Frederic to undertake a crusade, in which he conquered Jerusalem in 1229, and by his marriage with Iolantha, the daughter of the king of Jerusalem, who had been expelled by the Saracens, assumed the title of king of Jerusalem. After his return he forced the Pope to release him from the anathema, and called a Diet at Mentz, in which he proclaimed a general amnesty, and confirmed the hereditary rights of the smaller fiefs. In 1237, his second son, Conrad IV. was elected his successor; but scarcely had Frederic returned to Italy, when Pope Gregory IX. again laid the anathema upon him, and even proclaimed a crusade against him.

After Frederic's death in 1250, his son Conrad IV., was obliged to maintain the struggle which his father had begun with the Pope. He died in 1254; and strong suspicions were entertained of his having been poisoned by his step-brother Manfred, who claimed the possession of Sicily. Conrad's son, Conradin, a minor, the legitimate heir of Naples and Sicily, and of the German duchies of Suabia, Franconia, and Alsace, was brought up in Germany; while the Pope gave Naples and Sicily to the French prince, Charles of Anjou, in 1265. Manfred lost his life in a battle against the latter; and when, three years after this, Conradin appeared with an army in Italy to maintain his rights upon Naples, he was taken prisoner by Charles of Anjou, who caused him to be publicly executed at Naples, on the 29th of October, 1268. Thus expired the powerful family of the Hohenstaufen! The vacant German duchies were now seized upon by the great and small vassals, and gradually became immediate States of the empire;[7] and the same thing took place with the nobility, or *Ritterschaft*, in Suabia, Franconia, and at the Rhine. The troubles of this stormy period, or interregnum, during which two foreign princes, king Alphonso of Castile, and Richard of Cornwall, brother of the king of England, assumed the title of king of Germany, anew convulsed the whole empire, and threatened to interrupt and destroy the work of national civilization, which had been so successfully commenced under the House of Hohenstaufen.

House of Habsburg.] At no period of its history did Germany more require the guidance of a vigorous and wise ruler to save the nation from ruin, than at the moment when Rudolph of Habsburg, a man in every way fitted to hold the reins of government during so stormy a period, ascended

[7] That is, States holding of no other liege-lord but the emperor.

the imperial throne.[8] Rudolph united valour, gallantry, experience, and prudence in his character. He took and destroyed above 70 castles, whose proprietors had made robbery their profession; he united by marriages with his daughters three German electors to the interest of his house; and obtained Bohemia, after having conquered the king Ottocar in 1282. He prudently did not comply with the summons of the Pope to a new crusade; but he nevertheless ratified to the see of Rome, by a formal deed, not only the possessions formerly obtained from the Franks and German kings, but also their latter acquisitions of Ravenna, Bologna, Urbino, and Spolito.

After Rudolph's death, the German States desirous to have a prince of less energetic character on the throne, elected Adolph, Count of Warsaw. He lost his life on the 2d of July, 1298, in a battle against Rudolph's son, Albrecht of Austria, who had been elected king by several of the States in opposition to the others.

Albrecht, or Albert I., who after the death of his adversary was unanimously elected, soon showed his selfish and ambitious intentions. He irritated the Rhenish electors by wishing to take from them the tolls of the Rhine. He failed in another attempt upon Thuringia. He wished also to unite Switzerland with his dominions, and his governors exercised every kind of iniquity in that country; but the league formed by the Swiss in 1308, and Tell's boldness, preserved the freedom of that country, which was also supported vigorously against Albert's successors. He refused his own nephew John, the possession of the dukedom of Suabia, of which he was the lawful heir, and fell in 1308 by murderers' hands, the victim of a conspiracy at the head of which his nephew stood.

Henry of Luxemburg.] A less powerful prince, count Henry of Luxemburg, was elected his successor in 1308. He married his son, John, with Elizabeth, the last heiress of the race of the Vandals in Bohemia. When he endeavoured to calm the dissensions of the Guelphs and Ghibellins, who continued to contend in Italy, he obtained the Lombardian as well as the imperial crown, but embittered both parties by exacting a general tax. He died on the 24th August, 1313, probably of poison, when meditating the conquest of the kingdom of Naples.

The Hanseatic League.] It may be here the place to say a few words concerning the *Hanseatic* league, called also the *Hansa*, which in old German means 'a league.' Towards the middle of the 13th century, sea and land were covered with pirates and robbers. German commerce, though flourishing even in the troubles of the interregnum, was especially exposed to all attacks from without, as the merchants had lost the right to travel with an armed escort, and those formerly granted to them by the kings, though paid for, no longer existed. This suggested a league for mutual assistance and defence, which was first entered into between

[8] The lords of Habsburg possessed a small territory in Switzerland, in the northern quarter of the canton of Bern, near the river Aar, three miles south of the town of Bruck, and at the same distance to the north of Mellingen. Here, on a lofty eminence, crowned with beech, stands an ancient tower, the first seat of the house of Austria. This castle was built by Vernor, bishop of Strasburg, in the 11th century, and given by him to his brother Radbad. Vernor, son of Radbad, was the first who took the title of count of Habsburg, which his descendants always bore till the elevation of Rudolph to the imperial throne; yet at this time, by the extinction of the powerful house of Zeringen, descended from the ancient kings of Austrasia, in 1281, and that of the counts of Kyburg, the greater part of Switzerland, as the joint inheritance of these two powerful houses, fell to Rudolph, as vacant fiefs of the empire, and became the basis of his power and that of his successors.

Hamburg and the districts of the Ditmarschen and Hadeln, in 1239, and was joined by Lubec in 1241. In a short time the league increased so much, that in 1260 the first assembly was held at Lubec, which town was the head of the Hansa. The greatest number of confederated towns at any period was 85. They established four great factories abroad, viz. one in London in 1250, one at Bruges, one at Novogorod, and one at Bergen in Norway. The Hanseatic towns were taken under the protection of several princes, and soon grew so powerful, that they ruled by their treasuries and their arms over a considerable part of Europe; and it may give an idea of their power to state, that, on one occasion they armed a fleet against Denmark of 248 vessels and 12,000 soldiers. The prosperity of the league, however, depended upon the continuation of the circumstances which had led to its formation. When, therefore, land and sea ceased to be infested by robbers, and the different princes of Europe began to conceive the importance of commerce in their own States, and to direct their attention towards it; and particularly when Charles V. endeavoured to create a commerce in the Netherlands, the decay or dissolution of the Hansa became inevitable. In 1630, the last assembly was summoned at Lubec. At this meeting the towns separated, and only Hamburg, Lubec, and Bremen formed a new league, which also Dantzic joined occasionally, but without being numbered among the towns of the new Hansa.

Lewis of Bavaria.] A contested election in Germany opposed Frederic of Austria and Lewis of Bavaria to each other in 1313. Their struggle lasted eight years, until Frederic became Lewis's prisoner.[9] They re-united at last, and Lewis even intrusted Frederic with the government in Germany, whilst he himself was obliged to go to Italy to fight against Pope John XXII., who, from hatred to the Emperor, placed the whole of Germany under the interdict in 1331. Against this interdict, and against any farther attempt of the Pope to interfere in the election of a German King, six electors of the empire—with the exception of the elector of Bohemia—formed in 1338, the college electoral, according to the constitution of which the prince who should have the majority of votes was to be recognised as king.

Charles IV.] After Frederic's death, in 1330, Lewis reigned alone, but was shortly before his death again opposed by the king of Bohemia, who, after that event, succeeded to the throne under the name of Charles IV., in 1397. Charles was crowned emperor in Italy, and consolidated the government of Germany by the celebrated *Golden Bull*,[10] the first imperial fundamental law of the nation, which fixed the election of the Roman king, and the rights of the electors. By this deed the exclusive

[9] We cannot refrain to relate here a beautiful instance of good faith which took place in this case. Frederic on being taken prisoner was transmitted to the castle of Trauswitz. At last Lewis listened to the representations of his confessor, and threatened also by new enemies, agreed to give Frederic his liberty, upon condition that he was to renounce the imperial crown, give up the lands in his possession, which were held by his brother Leopold, and assist Lewis against the Pope. Frederic swore to return to his prison if he could not fulfil these conditions: and this he did. His brother Leopold having refused to agree to the treaty, Frederic returned as a prisoner, although released from his oath by the Pope; and Lewis, moved by the generous conduct of his enemy, became from that moment his warmest friend.

[10] It was called golden, because of the gold seal affixed to it, to denote its importance, as the fundamental law of the empire; and bull, from the *bulla*, or little gilt picture, shaped like a heart, which hung from the necks of the patrician youth, in the days of the Roman republic, till they were fourteen, or rather seventeen years of age, when exchanging the *bulla* and *toga prætexta*, for the *toga virilis*, or manly gown, they con-

right of the seven electors of Mentz, Treves, Cologne, Bohemia, Pfalz or the Palatinat, Saxony, and Brandenburg, to elect the king was fully acknowledged; and at the same time, the right of primogeniture in those countries to which the election belonged, their indivisibility, the *jus de non appellandi*, with many other rights and prerogatives, were confined to the electors. By the foundation of the university of Prague, in 1348, Charles did much for the advancement of science in the German nation; for this university was the *first* founded on German ground. He showed more self-interest in the liberal manner in which he conferred patents of nobility. The holders of these patents were called by the ancient nobles, *paper nobility*. He united Silesia and Lusatia with Bohemia, and bought the Mark Brandenburg.

Wenceslaus.] Wenceslaus, Charles' eldest son, succeeded him in 1378, in Germany and Bohemia. He was an arbitrary and whimsical ruler. On account of his inactivity, the States, in 1400, declared him to have forfeited the throne, and elected Ruprecht of the palatinat, and, after his death, Sigismund, Wenceslaus' brother, king of Germany. He was for a short time opposed by Robert of Moravia, at whose death Wenceslaus ratified the election of his brother, reserving however to himself the royal title. He died in 1419.

Sigismund—Council of Constance.] Sigismund had with greater talents, full as many faults as his brother; he was inconstant, whimsical, selfish, and prodigal. It was under his reign that the celebrated Council of Constance was held, on account of the acknowledged necessity of an improvement in the state of the Church. But that council incurred eternal infamy by the burning of John Huss, and Jerome of Prague. The doctrines of Wickliff had been already brought to Prague, under Wenceslaus' reign, particularly by Huss's friend, Jerome, who had studied at Oxford. A schism occurring at Prague, the Bohemians declared for the new doctrine, and the German professors against it. This contest, and several other disputes between the two nations, caused the Germans to found a university at Leipsic, in 1409. Huss, a courageous defender of the new doctrines, had already been persecuted, and even forbidden the pulpit, when Pope John XXIII. patronised a scandalous commerce of indulgencies then carried on in Bohemia, against which Huss and his friend Jerome publicly protested; and the first summoned all his adversaries to a public dispute, in which he conquered them by the force of his reasoning. Jerome then burned the bull of the pope, who now pronounced the anathema against Huss, and placed Prague under interdict; but Huss, without protection, went into the country, where he spread his principles among the people, for it was in these districts where he had taught that the *Taborites* were found. Matters stood thus, when the council was convoked in 1414 at Constance, whither Huss went with a safe conduct

secrated them to their *Lares*, or household gods, so that the term *bulla* came to be applied, in after times, to the seals of popes and emperors. This golden bull is written on 24 leaves of parchment, and contains 30 chapters. The golden seal affixed to it, has on the face, the representation of the emperor Charles IV. sitting on his throne, crowned with the imperial diadem, one hand holding a sceptre, and the other a globe; the imperial arms appear on the right, and those of Bohemia on the left, with the following inscription: 'Charles, by the favour of the Divine clemency, emperor of the Romans, always Augustus, and king of Bohemia.' The reverse of the seal presents Rome under the emblem of a castle, with two figures, one on each side, with the words, '*Aurea Roma*,' beneath, and in the circumference the following hexameter:

'Roma caput mundi, regit orbis fræna rotundi.'

'Rome, the head of the universe, manages the government of the globe.'

of the emperor. His friend Jerome followed him. Here he was accused of teaching damnable heresies; and being found guilty by his miserable judges, was offered the alternative of signing a formal recantation, or suffering a cruel death. Huss refused to retract his opinions without seeing them refuted, and was thereupon—in spite of the imperial safe-conduct—condemned as an heretic, and suffered death in the flames, on the 6th of July, 1415. The same fate overtook his friend Jerome, on the 30th of May, 1416. Sigismund had been persuaded to break his royal word, by being told that in the doctrines of Wickliff and Huss it was maintained, that those who lived in deadly sins were unworthy of holding the government in spiritual and worldly matters. Huss and Jerome died with great courage, and the flame of their pile soon shed its light through a great part of Germany. The persecution of the followers of Huss, and the general fermentation in Bohemia, caused the bloody war called that of the *Hussites*. Opinions which hitherto had only been broached in the class-rooms of the university, were now diffused among the nation; and thus the dawn of that glorious day hastened, which was to shine over the 16th century. In 1419, 40,000 people assembled on a mountain, to which they gave the name of *Tabor*, where they held their public worship, and took the sacrament under both forms; from which practice they obtained the name of *Utraquists*. John Ziska, an experienced warrior, placed himself at their head. Sigismund persecuted the Hussites, and sent an army against them; but his severe measures only roused their energies, and caused them to act with greater union. Ziska, and after him, Procop, carried on the struggle, and showed great resolution and intrepidity. The Pope now proclaimed a crusade against them; and in 1431, the elector of Brandenburg was placed at the head of an army, on purpose to extirpate the heretics. But in spite of the consecrated army of the elector, his army fled at the sight of the Hussites; and the cardinal who accompanied the elector, lost his bull, his robes, his cross, and his hat! A new council was now called at Basle, where Procop, formerly a monk, appeared, and defended those doctrines by his words, which he had formerly maintained by his sword. Though nothing was settled at this meeting, a deputation was sent to Bohemia, through which the so-called *Compactates* was negotiated, which allowed every Bohemian to take the sacrament under both forms, although one was declared sufficient. The powers of the Pope were in general preserved by this treaty, and the goods of the Church were also allowed to remain in the hands of the clergy.

Sigismund died without a male heir, and was succeeded in Bohemia, Hungary, and Germany, by his son-in-law, Albert II., duke of Austria, in 1437. This noble minded prince died too soon for the great plan he had formed,—the foundation of a new and better order of things in Germany. His widow had a son after his death, Wladislaus, who, as viceroy of Bohemia and Hungary, was very unlike his father.

Frederic III.] Frederic III. duke of Austria, was raised to the German throne in 1440. But this prince, though he enjoyed his dignity for more than half a century, performed a very indifferent part, whilst around him a new order of things, and a new political system arose in Europe. During, his reign, the Byzantine empire was destroyed by an Asiatic horde of Osman Turks, in 1453; in Spain, the Arabian dominion was destroyed, and the union of the whole kingdom prepared by the marriage of Ferdinand and Isabella; the introduction of gunpowder changed the form of war, in which personal valour alone no longer decided the victory,

and with it also changed the preponderance and spirit of chivalry; the sciences fostered by the newly instituted universities, and by the introduction of the art of printing, by John Guttenberg Schoeffer, and Faust, took a higher flight, and began to exercise a far-spread influence upon common life; in the cities, now flourishing through commerce and wealth, the middle class, or *tiers etat,* arrived at a greater degree of social influence; and the great progress in navigation led to the discovery of the Cape of Good Hope in 1486, and in consequence of a new road to the East Indies, by which commerce was greatly benefited, and ultimately to the discovery of America, in 1492. But Frederic III. remained passive in the midst of all these great events and changes, without making any use of them, and without giving by his influence a beneficent direction to the spirit of the age. His reign was several times disturbed by the attacks of the warlike king of Hungary, Mathias Corvinus, who had succeeded Wladislaus. His son, the archduke Maximilian of Austria, married Maria, the only daughter and heiress of Charles the Bold, duke of Burgundy, and thus brought her rich inheritance into the house of Habsburg.

Maximilian I.] The necessity of putting an end to the private feuds of the powerful vassals, was now felt by all the German princes; and at the first diet held by Maximilian I. at Worms, in 1495, a fine of 1000 gold marks was imposed on all those who in future should disturb the public peace. All complaints were directed to be brought before the *Imperial Chamber*, which was then constituted the supreme tribunal of justice for the whole German nation. The *Aulic Council*, which Ferdinand instituted at first for his own hereditary lands, in 1501, and which he intrusted with the management of the benefices and investitures, and those cases that had to be brought personally before the emperor, soon began to judge in lawsuits among the States of the empire; and having become at last a tribunal of the empire, was, under Ferdinand I. placed upon the same footing with the imperial chamber. Under Maximilian's government, Germany was divided into ten circles in 1512, for the better execution of the decisions of the imperial chamber, and an easier determination of the contingents to the army. The name of the ten circles were as follows:—viz. Austria, Burgundy, Bavaria, Suabia, Franconia, Upper Rhine, Lower Rhine, Westphalia, Upper Saxony, and Lower Saxony. Maximilian made provision for his own family, by completely uniting all the Austrian lands, after the Tyrolese line had been extinguished in 1496, and also by marrying his son Philip—who had inherited from his mother the Burgundian countries—with the princess Joanna of Spain, in 1496, and his daughter Margaretta with the infant John of Spain. By this double marriage, the succession of Spain came into the Austrian family. By the death of John, and that of his eldest sister, Queen Isabella of Portugal, in 1498, Philip's wife Joanna became the sole heiress of Spain, and assumed, together with her husband, the government of Castile, after the death of her mother Isabella in 1506. But Philip died the same year, and Joanna became deranged. The Castilian crown fell thus to their son Charles V., and after the death of his grandfather, Ferdinand of Arragon, he also succeeded to this kingdom in 1516. By a second double marriage of Maximilian's grandchildren, Ferdinand and Maria, with two children of Wladislaus of Hungary and Bohemia, Anna and Lewis, the acquisition of these two kingdoms for the house of Habsburg was prepared. Maximilian was less successful in his attempts to take Burgundy from France, and to force the Swiss confederacy to submit to the imperial

tribunal. He obtained from Pope Julius II. the title of Elective Roman Emperor, which all the succeeding rulers of Germany assumed directly after their election.

The Reformation.] The most important event of Maximilian's reign was the beginning of the Reformation, which proceeded from the university of Wittemberg, founded in Saxony, in 1502, by the elector Frederic the Wise. The first public symptoms of disaffection towards the church of Rome, were excited by the scandalous sale of indulgences, by the Dominican friar Tetzel, in the neighbourhood of Wittemberg. The custom of commuting the church penances imposed by the confessors, into the performance of certain charitable actions, or into donations of money for pious purposes, had long been acknowledged among the Catholics, especially towards the time of the Crusades, when bequests or gifts of money for defraying the expense of these expeditions, were deemed among the most pious acts which a Christian could perform. But the multitude gradually confounded this remission of church penance with that of the sin itself,—a mistake which the priests took no great trouble to correct at first, and ultimately encouraged; and thus the granting of indulgences for money became a most lucrative branch of the income of the Popes, who, since the days of Clement V. had appropriated to themselves, as Christ's vicegerents upon earth, the prerogative of the administration of the superabundant treasures of the merits of Christ and all the saints,—the *thesaurus meritorum superabundantium.* Among all those who carried on this wretched trade of selling indulgences on the account of the Pope, none had shown himself more impudent and greedy than the above mentioned Tetzel. Martin Luther, born at Eisleben, on the 10th November, 1483, had, as a monk of the order of Saint Augustin, gone to Rome in 1510, to settle some affairs relating to his order, and there had been an eye-witness of the corruptions of the Papal court. Disgusted by what he had seen, he returned to his own country, and set himself to oppose Tetzel with great zeal and vigour. As Professor in the university of Wittemberg, he, on the 31st October, 1517, published theses, according to the academical custom, in which he at first only declared himself hostile to the sale of the indulgences; but waxing bolder in the faith, in proportion to the hostility displayed by the court of Rome, he soon began to shake the whole edifice of the Papal hierarchy to its foundations, by the thunders of his resistless eloquence, and the matchless worth of his cause.

A quenchless beam of light now irradiated the moral darkness under which Europe had for so many centuries lain. Not the thunders of the Vatican, nor the ban of Papal princes, nor the voice of assembled councils could any longer withhold from the minds of men the great principles of religious freedom, and liberty of conscience. In the universities, and from the pulpits, the new doctrines were boldly taught,—translations of the sacred Scriptures were put into the hands of the common people,—the new doctrines were propagated in Switzerland by Zuingle,—and several noble-minded and spirited princes declared for the Reformation. In the north of Europe, the doctrines of the reformers were adopted, in 1523, by the king of Sweden, Gustavus Vasa, and by the Grand Master of the Teutonic order, Albert of Brandenburg.

It was favourable for the cause of the reformers that the public agitation broke out in the latter years of Maximilian's reign, who was then very much occupied on all sides; and that, since the war of the Hussites, loud declarations against the Pope, and the abuses in the Church, were

no longer viewed in a criminal light. It was also fortunate that the elector Frederic permitted Luther to go to Rome, whither he had been summoned by the Pope, who wished to treat the whole as an affair of heresy. Maximilian's death on the 12th of January, 1519, was also a fortunate event for the reformers' cause, as by it their great protector, the elector of Saxony, became regent of the empire. Even during Maximilian's lifetime, his grandson Charles, king of Spain, had endeavoured to secure the succession in Germany to himself: but he was only elected during the *interregnum*, on the proposal of the elector of Saxony, who had himself been offered the Crown, whilst three foreign princes, Charles of Spain, Francis of France, and Henry the VIII. of England, had taken steps for obtaining it. Charles was further obliged to sign terms of agreement before his coronation,—a proof of the prudence and enlightened policy of the electors. Charles held his first diet at Worms on the 5th January, 1521, and Luther was summoned to appear here, and to give an account of his doctrines. The Pope had already issued a bull against him, which placed him under the anathema, and his writings had been publicly burned at Rome. After having in vain endeavoured by letter to persuade the Pope to consent to a national reform of the Church, the intrepid reformer at last burned the bull, and the decretals of the Popish court, and by this step renounced for ever his allegiance to the Pope and the Catholic church. Many of the most noble-minded men in Germany hereupon joined his party, and offered him protection and assistance; and although warned by his friends of his danger, Luther appeared at Worms before the emperor, and the whole assembly of electors, princes, bishops, and other estates of the German empire, to give an account of his doctrines. His journey thither was like a triumph. Every one wished to see the man who defied the prejudices and abuses of so many centuries, and all the powers of the present world; and as he drew nigh to Worms, more than 2000 people came to meet him at some distance from the city. With the calmness of a saint, and the noble intrepidity of a martyr, the great reformer presented himself before the Emperor and the diet; confessed himself the author of the alleged heretical works, and ended his defence with these noble words:—"Unless I shall be convinced by the words of the Bible, or by open, clear, and convincing reasoning, I neither can nor will recant; for it is neither safe nor advisable to do any thing against one's conscience. Here I stand,—I cannot act otherwise,—may God help me! Amen." Charles at this diet pronounced the ban of the empire against Luther and his partisans, on the 26th May, 1521; whereupon the reformer left Worms, being indebted for his safety to his sovereign prince, the elector of Saxony, who took him prisoner on his return, and kept him at the Wartburg, where he spent his time in translating the Bible.[11] When the excesses of the Iconoclasts, or breakers of images, began at Wittemberg, Luther, much against the will of the elector, left the Wartburg, and exposed himself to every danger in his attempts to stop the raging of a furious mob. He then commenced, with the assistance of his friend Melancthon, in 1523, his work of reformation, at Wittemberg, by changing the liturgy and abolishing a great many of the Catholic customs.[12]

[11] The ruins of the Wartburg hang majestically above Eisenach, on a wooded eminence overlooking the most beautiful portion of the Thuringian forest. Among the few apartments still maintained in some sort of repair, is that in which the reformer lightened the tedium of his durance by completing his translation of the Bible.

[12] The intercourse carried on by men of letters throughout all Europe at this period,

The promulgation of the imperial ban against the followers of the new doctrines, had attached to them a political importance, and, like all persecution, only increased the number of partisans. Four successive wars with France—whose king, Francis I., was a personal rival of the emperor —prevented the latter from acting with as much vigour and severity against the protestants as he might have wished to have done.[13] The emperor's brother, king Ferdinand of Hungary, also required his assistance in the war against the Turks; and all these reasons prevented the emperor from turning his whole power against the Protestants, who rapidly spread in Germany and the neighbouring countries, although the Catholic party formed a powerful opposition. The strongest and most dangerous enemy of the reformation, however, arose at a later period, (1540,) in the order of the Jesuits. In 1520, the Protestant princes entered into an alliance at Tergau, at the head of which stood the new elector of Saxony, John the Magnanimous, and the landgrave, Philip of Hessen. The name of *Protestants* was given to the followers of the new doctrine, on account of their protestations against the conclusions of the Diet of Spires, in 1529, by which their interests were hurt. Charles, after having been crowned emperor by the Pope, at Bologna, convoked the German States to a Diet at Augsburg, and here the Protestants were allowed, on the 28th of June, 1530, to present their profession of faith, written by Melancthon, in 28 chapters, and which has since been called *The Confession of Augsburg*. The Diet, however, determined that the new heresy should be put down, but allowed the Protestants till 15th of April, 1531, for returning to the Catholic church. In 1524, the *Peasants' war* had begun in Suabia, and rapidly spread over the provinces at the Rhine, Lorraine, Franconia, Thuringia, and Saxony. The pressure under which the lower classes of the people suffered in those times was very hard, and naturally led to this fearful rebellion, which ended by the defeat of the army of the peasants in the battle at Frankenhausen, in 1525, and the execution of their chief, Thomas Münger, who was beheaded at Mühthausen. The sect of the Anabaptists, against which it was resolved, at the Diet of Spires, in 1529, to proceed with fire and sword, had been much diminished by persecution, and a small number of them had retired to the Netherlands, from whence they sent, from time to time, missionaries to Germany. In 1533, they gained a new party in Munster, where John Malthieson, a baker, from Harlem, and John Bockold, a tailor, from Leyden, better known under the name of John of Leyden, appeared as their chiefs. After having committed all the horrors to which fanaticism, influenced by persecution, and supported by plunder, can lead an enraged mob, they were besieged at Munster, which John had declared to be the kingdom of Zion, and he himself the king of it. Malthieson was killed during the siege, and John, and another

gave to our new German reformers an immense weight of influence even beyond their own country. "It had long been the custom," says the historian of the Reformation in Italy, "for the German youth to finish their education, especially in law and medicine, at Padua, Bologna, and other Italian universities. The Italians, in their turn, now began to visit the schools of Switzerland and Germany, where literary reputation was daily advancing; and many of them were attracted to Wittemberg by the fame of Melanathon, who was known to most of the learned in Italy." Thus, Wittemberg formed the centre from which the blessings of the reformation were spread over Europe.

[13] As these wars principally related to the emperor's hereditary lands and Italy, they will be more properly mentioned in the history of these countries, and in that of France.

of his assistants, Knipperdalling, who had been one of the magistrates of Munster, were executed, on the storming of the city, in 1536, after having been tortured in the most shocking manner. This put an end to the sect of the Anabaptists in Germany. Meanwhile the brother of the emperor, Ferdinand, king of Hungary and Bohemia, had been elected Roman king in 1531; but with the protest of the protestant princes, who formed at Schmalkalden, on the 27th February, 1531, a defensive alliance, known under the name of the League of Schmalkalden, which alliance became so important for the house of Austria, then threatened by the Turks, that the emperor, in order to gain the assistance of the protestants, consented to sign the so-called religious peace, on the 23d July, 1532, by which complete freedom of conscience was secured, till a general council should have given its opinion.

New troubles now broke out in Germany; the intentions of the Catholic duke of Brunswick, Henry, seemed hostile to the Protestants, and warlike measures were taken by the two heads of the league of Schmalkalden, the elector of Saxony, John Frederic, and the landgrave, Philip of Hessen. Attempts were likewise made in Saxony to secularize the chapter of Naumburg, by not filling up the places as they became vacant by the death of the members. All these reasons, to which was still added, the inclination for the Protestant religion, shown by the elector and archbishop of Cologne, Hermann, and the refusal of the Protestants to send deputies to the Council of Trent, in 1545, caused so many misunderstandings among the two parties, that at last the war of Schmalkalden burst forth in 1546. The secession of duke Maurice of Saxony from the league of Schmalkalden, in 1546, considerably weakened the Protestant cause. This was also the year of Luther's death, whose name will live as long as truth has friends upon earth.

The Protestants, seeing the emperor's preparation for war, applied to know his intentions, and the answer they received leaving them in no doubt respecting them, they issued a manifesto on the 15th July, 1546, in which they made known the intentions of the emperor against their party. This was followed, on the other side, by the ban of the empire being pronounced against the elector of Saxony and the landgrave of Hessen. Whilst the troops of the league of Schmalkalden, which had already advanced to the Danube, remained inactive, Duke Maurice of Saxony, who had been charged with the execution of the sentence against his cousin, invaded Saxony, which he conquered, with the exception of Wittemberg, Gothen, and Eisenach. The elector thereupon left the army of the league, and hastened to rescue his own possessions; in which he at first succeeded; but Charles, and the Roman king, Ferdinand, hastened to the aid of Maurice, and defeated the elector at Mühlberg, on the 24th of April, 1547. John himself was taken prisoner, and condemned to death by the emperor; but this sentence was subsequently, on the capitulation of Wittemberg, commuted so far that the elector was to remain in captivity, but to lose his dignity and all his lands, which were given to Maurice. An income of 50,000 florins, and some districts in Thuringia, were all that remained to the sons of the unfortunate Elector. The landgrave of Hessen submitted to the emperor at Halle, and was treated as a prisoner, although his submission was made under the express condition of personal freedom. At the first Diet of Augsburg, in 1548, the emperor forced a written formula of faith—the *Interim*, as it was called—upon some of the Protestant princes. Hereupon, those clergy

men who had not submitted to the Interim assembled at Magdeburg, which had remained attached to the league of Schmalkalden, and which was therefore placed under the ban of the empire, which was to be executed by the new elector, Maurice of Saxony. But Maurice, dissatisfied with the captivity of his father-in-law, Philip of Hessen, and the intentions of the emperor against the liberty of the Protestants, united with king Henry II. of France against the emperor, and, supported by his brother-in-law, prince William of Hessen, and the Margrave, Albert of Culmbach, attacked the emperor, and forced him to the treaty of Passau, on the 31st of July, 1552, in which, till the final settlement of all religious disputes, complete freedom of conscience, and equality of civil rights with the Catholics, were secured to the Protestants. Both the captive princes were also set at liberty by the emperor.

On the fall of Maurice in battle against his former ally, Albert of Culmbach, on the 9th July, 1553, and the succession of his brother, August, to the electorate, this treaty of Passau was made the basis of the religious peace of 1555. Whilst Maurice had surprised the emperor, the king of France, Henry the II., had taken possession of the three Lorraine bishoprics of Metz, Verdun, and Toul, which he retained. Charles, pressed down by all these misfortunes and bad health, in 1555 abdicated the government of the Netherlands, and, in 1556, that of Spain; in both which countries he was succeeded by his son, Philip, and, in Germany, by his brother, the Roman king,[14] Ferdinand. The emperor died in a convent in Spain, on the 21st September, 1558.

Under Ferdinand the First's short government, from 1558 to 1569, the Aulic council obtained greater consistency. Ferdinand had a severe struggle with Pope Paul IV., who declared the resignation of Charles V. null and void, as not having been made in his hands, and imposed upon the emperor very hard conditions of sanction. Among other stipulations, it was required of him that he should introduce the Inquisition into the whole of Germany, and abolish all printing-offices, with the exception of those which the pope might be pleased to confirm. To these ridiculous demands the emperor, by his chancellor, returned a manly answer, in which he reminded his Holiness that there had been emperors before there were popes; that Christ had no need of a vicegerent upon earth; or, if the pope was to be considered as the head of the visible church, it should only be in the same manner as Christ himself had appeared upon earth: namely, without worldly power; that the coronation of an emperor had no political value; and that, if no emperor should be considered as legitimate without it, Rudolph the first, who had never been crowned by a pope, was not a lawful emperor, and consequently his donation of Bologna and Romagna to the pope were also not lawful, and ought to be restored. Since the period of this contest with the pope, no German emperor has been crowned at Rome. The Council of Trent concluded its deliberations on the 4th of December, 1563. The resolutions adopted by that body against the Protestants were so severe, that from this time no reconciliation between the two parties could be looked for.[15]

[14] The title of *Roman King* was given to the successor of an emperor when elected during the lifetime of his predecessors.

[15] From this period the pope endeavoured, and so far succeeded, to re-establish his influence in Germany, by two leading measures: the first was the establishment of permanent nuncios in Vienna, Brussels, and Bologna; and the second, and still more effective measure, was the dissemination of the order of the Jesuits, founded by Igna-

Maximilian II.] Maximilian II., Ferdinand's son, was a prince of great moderation, but was compelled to act with great severity against duke John Frederic of Gotha, who protected the knight, William Grumbach, when placed under the ban of the empire for the murder of the bishop of Würzburg. The disputes between the Lutherans and Catholics, and between the former and the Calvinists, were kept up during his reign. Before Maximilian's death, his son, Rudolph II., had been elected Roman king. Under the reign of this prince, from 1576 to 1612, were formed the union of the Protestants and the league of the Catholics, of which the melancholy consequence for Germany was the Thirty years' war.[16] Rudolph being entirely inactive in the affairs of

tius Loyola, in 1540. This powerful order formed at this era the greatest counterpoise to Protestantism, and was at that time—as it is still—the most formidable enemy of religious liberty which had ever been brought into play upon society. The General of the Jesuits, to whom all the members of the order were obliged to pay strict obedience, lived at Rome, and enjoyed great privileges. The order kept strictly to its great end of getting an entire sway over the feelings and ideas of its members, none but the cleverest young men were admitted into its ranks, and they were obliged to serve a long noviciate of thirteen years before they could rise to the higher classes of schoolmen, coadjutors, and professors, and that too by very slow steps. The strictest obedience was required of them in every matter; the knowledge which they acquired by those severe courses of preparatory education produced for them a great influence over the learned class; their flattering and pernicious morals introduced them into higher circles, and procured for them the places of confessors in the different courts; their skill in dialectics obtained them professorships for the education of youth; erudition, cunning, and perseverance soon raised this order above all other monastic corporations, and, in a short time, it had gained immense and overwhelming influence in Europe. Their third general, Francis Borgia, when on his deathbed, about six weeks after the St. Bartholomew massacre at Paris, is said to have exclaimed, in prophetical spirit: *Intravimus ut agni, regnabimus ut lupi, expellemur ut canes, renovabimus ut aquilae!* 'We have slipt in like lambs; we will rule like rapacious wolves; we shall be chased like dogs, and revive again like eagles.' They spread out with such rapidity that, in 1550, sixteen years after the foundation of the order, they possessed 9 establishments in Europe—1 in Portugal, 3 in Spain, 1 in France, 2 in Germany, and 2 in the Netherlands; 1 in Brazil, 1 in Ethiopia, and 1 in India. The vow of poverty hindered individual members from acquiring riches, but the society was allowed to hold extensive possessions. By the correspondence with all parts of the earth, maintained by their general at Rome, that see became the centre of a great and complicated system of observation; and the popes regained, by means of this dangerous order, a part of that influence over Europe, which they had lost by the Reformation. We shall afterwards speak of the abolition and revival of the order.

[16] The Thirty years' war originated as follows: In the pacification of Passau, two parties only were included, namely, the Roman Catholics, and those who adhered to the confession of Augsburg, commonly called the Lutherans; and the exercise of religious worship was forbidden to all others. But some of the States of the empire, as the elector palatine, the landgrave of Hessen Cassel, and the elector of Brandenburg, having subsequently to that period embraced the sentiments of Calvin, the Roman Catholics were for denying them the benefit of the religious concordat. The Calvinists, on the other hand, maintained that they, as well as the others, did belong to the Augsburg confession, and that the whole difference between them, consisted only in a few heads. But the Lutherans, who strictly adhered to the confession of Augsburg, would not receive them into the same communion; though it was their opinion, at the same time, that they ought not to be persecuted on account of the differences which existed between them. Various attempts had been made to accommodate matters between the Lutherans and the Calvinists, at different times: as in the conferences at Cassel, in 1601, between the professors of Rinteln, who were Lutherans, and the professors of Marpurg, who were Calvinists; and the conferences at Leipsic, between the Saxon doctors, and those of Brandenburg and Hessen Cassel; but these had been attended with no amicable fruits. The flame of discord thus excited, was artfully cherished by the Roman Catholics, who caressed the Lutherans, especially those of Saxony, while they took care to represent the Calvinists, as a party whose views and interests were equally destructive to both parties. By playing this artful game, they hoped to disjoin the two great bodies of Lutheran and Calvinistic Protestants; justly concluding that after they had destroyed the latter, it would be easier work to extirpate the former. This obliged the German Calvinists to unite in a common league for self-preservation, under the name of the *Evangelical Union*. In opposition to this was formed the *Catholic league*, headed by the duke of Bavaria,—a constant rival of the elector palatine. Severe and dreadful measures had long been secretly concerting against the friends of

government, and proving himself the mere tool of the Jesuits, the princes of his family declared his brother, Mathias, chief of their house, and Rudolph was compelled to relinquish to him, in 1608, the countries of Austria and Hungary, and, three years afterwards, those of Bohemia, Silesia, and Lusatia. Under the government of his successor, Mathias, a civil war broke out in Bohemia, in 1618. The Bohemians formed a commission under the direction of Count Thurn, for the administration of affairs, in which they were assisted by the inhabitants of Silesia and Lusatia, and obtained troops, under the command of Count Mansfield, from the Protestant union. At this critical juncture, while Bohemia, Silesia, and Lusatia, were in rebellion against the house of Austria, the emperor Mathias died on the 20th of March, 1619, having secured the succession to his cousin, Ferdinand of Styria.

Ferdinand II.] Ferdinand II., a pupil of the Jesuits, brought a gloomy and concealed character to the throne. He was elected emperor on the 28th of August, 1619, in spite of the opposition of the head of the union, the elector palatine Frederic, and that of the Bohemians. The latter, together with the States of Silesia, Moravia, and Lusatia, elected the elector palatine Frederic, who, after some hesitation, accepted the Crown, relying partly on the assistance of his father-in-law, James I. of England,[17] and partly on the diversion in his favour occasioned by

the Reformation; and the house of Austria had been pitched upon as the fittest instrument to put the plan in execution, that house being the political head of the Germanic body, and well-known for its attachment to the cause of Catholicism. However, that some pretext might not be wanting to justify the measures then in agitation, the pens of the Jesuits, that learned, artful, and powerful party, were employed to prove that the treaty of peace, made at Passau, in 1552, between the emperor Charles V. and the German Protestants, was essentially unjust, and null, and had been infringed by the Protestants themselves, in their departing from, or at least perverting, the confession of Augsburg; they were also charged with having reduced a great many church-livings, since the peace of Passau. A defence of the Lutherans against these charges, was drawn up by order of the elector of Saxony, in 1628 and 1631, in which good care was taken not to identify themselves with the Reformed church. The flames of this religious warfare first broke out in Austria, in the end of Mathias' reign. A great part of the Austrian population, with many of the Austrian nobility, had embraced the Protestant faith. These persons were cruelly and shockingly persecuted by their Popish adversaries. The solemn treaties and conventions by which the civil rights and privileges of the Protestants had been secured under Rudolph, were violated in the grossest manner; nor had the unhappy sufferers resolution, or means sufficient to maintain their privileges. This persecution extended through Austria, Styria, Moravia, and Carinthia. But the Bohemians, who were involved in the same calamities, acted with greater intrepidity. Perceiving clearly, that the votaries of Rome aimed at nothing less than absolute conformity, or utter extirpation, they resolved to defend those rights and privileges which had been purchased by the blood of their ancestors, and so lately confirmed by imperial edicts; and, accordingly, they formed a league to defend, in a spirited and vigorous manner, their civil and religious rights. This conduct, though it struck their enemies with astonishment, produced no change of conduct. In the mean time Mathias died, and was succeeded by his son Ferdinand, a devoted friend to the Catholic cause.

[17] Had the king of Bohemia been duly supported by his father-in-law, and the elector of Saxony, then one of the most powerful potentates of Germany, the scheme might possibly have succeeded. But James was utterly averse to Frederic's accepting the Crown of Bohemia at all; and as Frederic had acted contrary to his advice in taking it, he would vouchsafe him no assistance whatever. Though the English nation were in general zealous for the Protestant interest in Germany, yet the faction of Laud, who had by this time got the complete ascendancy over the mind of James, looked upon the interests of the Reformed church, or Calvinism, with an evil eye, and would not suffer one step to be taken, that could in any way advance the cause of Frederic, who was unfortunately a professed Calvinist. The elector of Saxony, a professed and zealous Lutheran, not only did not assist the Bohemians, and their newly-elected monarch; but, partly from hatred to the Calvinists, and partly from political considerations, strenuously assisted the interests of the Austrian family. A zealous Lutheran clergyman, and one of the elector of Saxony's chaplains, persuaded his master not only that the cause of Frederic was unjust, but that his elevation to

the bold inroads on Austria of the prince of Transylvania, Bethlen Gabor. But he was defeated in the battle of the White Hill, in Bohemia, by Maximilian, at the head of the troops of the league, and obliged to take refuge in the Netherlands. Silesia, Moravia, and Lusatia, were also again reduced to the emperor by the elector of Saxony, John George I., and the Spanish general, Spinola, entered from the Netherlands into the palatinat. Ferdinand now deprived the Bohemians of all their privileges, and bestowed the lands and dignities of the elector palatine on Maximilian of Bavaria, in 1623, after that Tilly had conquered Heidelberg,[18] and Manheim. Lusatia was pledged to the elector of Saxony in indemnification of the expense of the war. But although the rebellion in Bohemia was subdued, the troops of the league remained under arms in Germany. The king of Denmark, Christian IV., placed himself, in 1625, at the head of the troops of the circle of Lower Saxony, but was forced by Tilly to retreat to Varden, and Albert, Count of Wallenstein, furnished the emperor, at his own expense, with an army, with which he defeated Count Mansfield at Dessau, on the 25th of April, 1626, while Tilly defeated the king on the 27th August following, at Lutter. The dukes of Mecklenburg having joined the king of Denmark were declared under the ban of the empire, and their lands given to Wallenstein, already raised to the dignity of duke of Friedland. On the 12th of May, 1629, a peace with Denmark was concluded at Lubec, upon which Christian withdrew from a participation in the German affairs, and had his provinces restored to him.

The success of the imperial arms filled the votaries of Rome with joy. The lamentable discord of the German princes, and the base conduct of the Lutherans, and particularly of a Lutheran elector, in supporting the cause of Popery and persecution against a generous people striving for Protestantism and the rights of conscience, buoyed up the minds of the Papal faction with the hope of the utter extermination of every sect that dared to call in question the doctrines of Rome. Accordingly, the same year, Ferdinand issued the terrible *restitution edict*, commanding all the Protestants to restore to the church of Rome all the possessions they had acquired in consequence of the peace of Passau, in 1552.' The Jesuits were the prime suggesters of this edict, and claimed a great part of these goods and possessions, as a recompense due to their labours in the cause of religion. When the consequences of these iniquitous and barbarous proceedings were represented to the emperor Ferdinand, and he was assured that the country must be utterly ruined, in case the Bohemians, rendered desperate by his enormous cruelty and oppression, should exert themselves in defence of their liberties, and endeavour to repel force by force, he is said to have answered with great calmness, '*Malumus regnum vastatum quam damnatum*,' 'We would rather

the Bohemian throne would be highly detrimental to the Lutheran interest, as it would advance that of Calvinism. Thus, the narrow views and selfish spirit of religious party, ruined the common cause of Protestantism in Germany. The Lutherans could not endure to see the progress of Calvinism; and rather than it should succeed, willingly supported the cause of Austria and Rome,—the common and implacable enemy of both!

[18] On this occasion the famous library of the Protestant university in Heidelberg, which at that time, as Scaliger affirms, was larger and better stocked with valuable books and manuscripts, than the Vatican at Rome, and exceeded all in Germany for the number and rarity of its volumes, and especially its manuscripts in the Hebrew, Greek, Latin, Chaldee, Arabic, Persic, Ethiopic, Tartarian, Teutonic, and Bohemian languages, was carried off by the Spaniards and Bavarians, part of it being sent to the Vatican at Rome, and part to the Imperial library at Vienna.

choose to see our kingdom reduced to a desert, than to have it damned as the abode of heretics.' No hope of succour to desolated Germany appeared, and none of her princes ventured to stand in the breach. The Lutherans basely stood aloof, and enjoyed, with secret satisfaction, the triumphs of their common enemy over their Protestant though dissenting friends. But He who ruleth in the councils of princes, and maketh even the wrath of man to praise him, brought about the deliverance of Germany.

Cardinal Richelieu, who was as zealous a Catholic as Ferdinand, and had but two years before accomplished the destruction of the power of the Huguenots in France, had long viewed with alarm the growing power of the house of Austria, and clearly saw, that unless some stop were put to the victorious career of Ferdinand, the annihilation of all the German principalities would ensue, the political equilibrium would be destroyed, and the future aggrandizement of the French monarchy—the darling object of the cardinal's schemes—be completely frustrated. In order, therefore, to prevent the subversion of German independence, and defeat the ambitious views of Austria, he prevailed upon Gustavus Adolphus, king of Sweden, by the offer of a handsome subsidy, and active co-operation of a French army on the west of the Rhine, to undertake the defence of the Protestants in Germany. Gustavus landed, in 1630, on the coast of Pomerania, compelled the Austrians to retreat, re-established the dukes of Mecklenburg in their possessions, and forced the duke of Pomerania, the electors of Brandenburg and Saxony, and the landgrave, Philip of Hessen-Cassel, to unite with him. After defeating Tilly at Breitenfeld, Gustavus Adolphus turned towards the Rhine, leaving the conquest of Bohemia to the Saxons; but the latter were driven out of that country by Wallenstein, who encamped, after this success, at Nuremberg, opposite the king, who had already conquered Munich and Augsburg. After a vain attempt upon this camp, on the 24th of August, 1632, Gustavus intended to attack the emperor and the elector of Bavaria on their own territories; but he yielded to the request of the elector of Saxony, whose country had been invaded by Wallenstein, and fell in the battle of Lützen, where his own general, Bernhard of Weimar, obtained the victory. Upon this event, the Swedish chancellor, Oxenstierna, assumed the management of the affairs of the Protestants. Wallenstein, who did not support his personal enemy, the duke of Bavaria, and who was accused of intentions to place the crown of Bohemia on his own head, was assassinated on the 15th of February, 1639, at Eger, by the command of the emperor, whose son, the archduke Ferdinand, assumed the command of the army, and defeated Bernhard of Weimar in the battle of Nördlingen, on the 7th September, 1634; upon which, the elector of Saxony, in the peace of Prague, concluded on the 30th of May, 1635, renounced the Swedish alliance, and obtained Lusatia as an hereditary possession from the emperor, and the bishopric of Magdeburg for his son, Augustus. By the same treaty it was arranged that the church property, secularized by the Protestants in Germany, should remain in the same state in which it was on the 12th of November, 1627, for forty years longer. Soon after this peace, the elector of Saxony, in order to drive foreign troops out of Germany, entered with Austria into an alliance against Sweden. France, on the other hand, renewed her alliance with Sweden, to which she agreed to pay considerable subsidies, besides sup-

porting an army of 12,000 men, led against Austria by duke Bernhard of Weimar.

Ferdinand III.] Ferdinand II. died on the 15th of February, 1637, and was succeeded by his son, Ferdinand III. Whilst the Swedish general, Bauner was devastating Silesia and Bohemia, Bernhard defeated the Austrians and Bohemians at Rheinfelden and Breisach, in 1638; but he died suddenly in 1639. His army, however, continued in French pay under the command of General Guebriant. After Bauner's death, Torstenson took the command of the Swedish army in 1642, and defeated the archduke, Leopold William, and general Piccolomini at Leipsic, which city was taken by the Swedes. Torstenson meant to carry the war into the Austrian provinces, but the jealousy of Denmark broke out into a war, to which Torstenson was forced to put an end by occupying Holstein and Jutland, after which he again marched upon the Austrians, and defeated them in the battle of Jankowitz, on the 24th of February, 1645. By an armistice concluded on the 27th of August, 1645, the elector of Saxony retired from all participation in this war, which had dreadfully ruined his country. The new elector of Brandenburg, Frederic William, also freed himself from Austrian influence, and Maximilian of Bavaria alone remained with the emperor. The united French and Swedes invaded Bavaria in 1646, and compelled the elector to conclude an armistice at Ulm, which, being quickly broken by him, Turenne and Wrangel again invaded Bavaria, and general Konigsmark entered Bohemia. The peace of Westphalia, concluded at Osnabrück with the Swedes, and at Munster with the French, on the 24th of October, 1648, reconciled the nations of Europe, and gave to Germany a new political form.

Peace of Munster.] In this peace, the independence of the two republics of the United Netherlands and Switzerland, which formerly had belonged to Germany, was acknowledged; and a complete civil and political equality of rights, and the free exercise of religion by Catholics and Protestants—including the members of the reformed church—was lawfully established.[19] The two victorious powers, France, and Sweden, were guarantees of the peace; the former, besides the confirmation of the sovereignty of Metz, Verdun, and Toul, obtained the possession of the Alsace, the Sundgau, and the fortress of Breisach, with the right of having a garrison at Philippsburg; but all the immediate States of the Alsace were to preserve their rights. Sweden obtained a part of Pomerania, the fortress of Stettin, and the island of Rugen, Wismar, Bremen, and Verdun, and a vote at the German diet. The elector of Brandenburg was indemnified for these places, by the secularized bishoprics of Magdeburg, Halberstadt, Minden, and Camin. Mecklenburg got Schwerin, Ratzeburg, Mirow, and Nemerow; and the house of Brunswick-Luneburg (Hanover), the alternate possession of the bishopric

[19] The Protestants, indeed, did not obtain all the privileges they claimed, nor all the advantages they had in view: for Ferdinand absolutely refused to re-instate the Bohemian and Austrian Protestants in their religious privileges, or to restore the upper palatinat to the successor of the unfortunate Frederic. It is, however, true, that this treaty gave a degree of stability to the Protestant interest in Germany unknown before. This peace was so disagreeable to the views and interests of the Papacy, that the pope employed every means to prevent its accomplishment, and a flaming bull was issued, in 1651, against it by Pope Innocent—a commentary upon, and a refutation of which, was published by the learned Hoornbeck, in Holland—but all his efforts, were fruitless, and the treaty was confirmed and ratified in all its parts, at Nuremberg in 1650.

of Osnabruck. Hessen-Cassel was also indemnified, and an eighth electorate formed for the palatine house, although, against the letter of the Golden Bull. The son of the outlawed Frederic, Charles Lewis, got the lower palatinat, and many other German princes were reinstated in their possessions. Of the powerful Hanseatic league, there remained at this period, only three towns: viz. Hamburg, Bremen, and Lubec.

Leopold I.] After Ferdinand the Third's death, his son Leopold I. a prince of a pacific disposition, but too much influenced by the Jesuits, was elected emperor. During his government, the diet of Ratisbonne became permanent. Leopold was involved in a war against Turkey, in which the daring grand vizier Achmet Kiupruli advanced victoriously into Hungary and Moravia, in 1662; but the victory won by Montecuculi, on the 1st of August, 1664 at St. Gotthard upon the Raab, led to an armistice of twenty years between Austria and Turkey.

The struggle between France and Austria, was several times renewed during Leopold's government, whose brother-in-law, Louis XIV. reigned in France. The latter, had immediately after the death of his father-in-law, Philip IV. of Spain, asserted, in 1665, his claims to the Spanish Netherlands, or circle of Burgundy; but a triple alliance between the Netherlands, England, and Sweden, forced him to the peace of Aix la Chapelle in 1668, by which Louis merely gained the possession of some fortresses in Belgium. The peace of Nimeguen was almost entirely concluded upon the *status quo*, only that France obtained by it from the Spanish possessions in the Netherlands merely the Franche Comté.

At the time of this French war, Leopold I. became involved in another war against Turkey; the Hungarian States discontented by Austrian oppression, having placed with the approbation of France, and the prince Abaffi of Transylvania, the kingdom of Hungary under the protection of the Sublime Porte in 1682, which dr[illegible] a declaration of war from the latter power against Austria. The grand vizier, Kara Mustapha, advanced with 200,000 Turks through Hungary, and laid siege to Vienna, on the 14th of July, 1683; but the gallant John Sobiesky of Poland, the Saxons, Bavarians, and the prince Charles of Lorraine, forced the Turks to raise the siege on the 12th of September following, upon which the war took an advantageous turn for Austria, and the Transylvanian prince submitted as a vassal, while the Hungarian States renounced their right of election, and declared Hungary an hereditary State of the house of Austria. After a great victory gained by the Austrian general, prince Eugene of Savoy, at Zentha, on the 11th of September, 1697, the peace of Carlowitz was concluded on the 26th of January, 1699, by which Hungary, Transylvania, and Slavonia remained in the possession of Austria.

During this war with the Turks, Louis XIV. had succeeded in getting possession of several countries formerly belonging to Lorraine and Alsace, and even Strasburg. After the house of the elector palatine had become extinct in 1688, France claimed a considerable part of its lands for the duchess of Orleans, the sister of the last elector, which occasioned the devastation of the countries of the Rhine, and the burning and plundering of the cities of Spires, Worms, Manheim, and many others, by the orders of the French minister of war, Lauvois. The Stadtholder, William III., having mounted the throne of Great Britain in 1688, negotiated the Grand league, as it was called, between the two maritime powers of Great Britain and the Netherlands, and Austria, Spain, and Savoy. William was,

however, more successful against the French in the cabinet than in the field, and many dissensions divided the Allies. The duke of Savoy first concluded a separate peace with France; and the peace of Ryswick was afterwards concluded in 1697 between that country and all the allied powers. In this treaty, Louis gave up all that he had united with France from Alsace, and the duchess of Orleans received a sum of money for her claims upon the palatinat, in which however the Catholic religion—which had been re-established by the French in 1692—was recognized in spite of the opposition of the Protestant States of the empire.

An important event for some of the German States was the creation, in 1692, of a ninth electorate, which was conferred upon the duke Ernest Louis of Hanover, whose son George Louis mounted the throne of Great Britain in 1714. The elector of Saxony, Frederic Augustus, was named king of Poland in 1697, after he had adopted the Catholic creed; and Prussia, which, since 1657, had been regarded as a sovereign duchy, was elevated to the rank of a kingdom under Frederic I., in 1701.

The death of Charles II. of Spain—with whom the Spanish line of the house of Habsburg was extinguished—kindled the flame of the Spanish war of succession. Charles had at first intended that the archduke Charles, Leopold's second son, should be his successor in Spain; but in consequence of French influence, he afterwards nominated Philip of Angou, grandson of Louis XIV., heir to his whole monarchy, upon which the war broke first out in Italy, where Austria occupied the vacant fiefs of the empire, particularly Milan. Whereupon England and Holland, to counterbalance a union so powerful as that of France and Spain, joined Austria on the 7th of September, 1701, and their example was followed by Prussia, the German empire, Portugal, and Savoy. After William's death, queen Ann of England, and Marlborough, her minister and general, united with Heinzius, the landgrave of the Netherlands, and the Austrian general, prince Eugene, to counteract Louis' preponderant power. On the other hand, the electors of Cologne and Bavaria—to the latter of whom Louis had promised the Netherlands—and the duke of Brunswick Wolfenbüttel, took the side of France.

Eugene opened the campaign successfully in Italy, but Vendome defeated the Austrians at Reggio, in 1702. At the Rhine, the Austrians began by the siege of Landau, and having invaded Bavaria, were defeated by Villars at Hochstadt, on the 12th of September, 1703. Marlborough now hastened from the Netherlands to Austria's aid, conquered the Bavarians on the Schellenberg near Donauwerth, and defeated, with the assistance of prince Eugene, the French, and French Bavarian army, under the command of the elector, at Blenheim, on the 13th of August, 1704. In consequence of this victory, the Austrians occupied Bavaria.

Joseph I.] The death of the emperor Leopold, on the 5th of May, 1705, did not operate any change in the proceedings of the war, as his elder son Joseph I. succeeded him in Germany. In the meantime, the archduke Charles, supported by the English, who had already reduced Gibraltar, landed at Barcelona, and conquered Catalonia and Navarre in 1705. Marlborough's great victory at Ramilies, on the 23d of May, 1706, and that of Eugene, at Turin, on the 7th of September, 1706, compelled the French to leave Italy, upon which Milan, Naples, and, Sardinia, were conquered by the Austrians for the archduke Charles, and the duke of Savoy re-established in Piedmont. The Spanish Netherlands

were also occupied by the Austrians, after Marlborough's victories at Oudenarde, 11th July, 1708, and at Malplaquet, 11th Sept. 1709.

Peace of Utrecht.] However disadvantageous this war had been for Louis XIV., the great change in the ministry of England, when Marlborough fell into disgrace with Queen Ann, and particularly the death of the emperor Joseph in 1711, who was succeeded by his brother Charles VI. in Austria and Germany, had a decisive influence on the peace of Utrecht, concluded on the 11th of April, 1713, between England, the Netherlands, Prussia, Portugal, Savoy, and France, by which Philip V. was to have Spain with all its colonies, but France and Spain were declared distinct and for ever separate kingdoms. France forsook the cause of the pretender, and acknowledged the succession of the house of Hanover in England, which country kept Gibraltar, Minorca, and Nova Scotia. Austria obtained Belgium, Naples, Milan, and Sardinia; and Savoy, Sicily, with the royal title.

During this war of the Spanish succession, the Turks had remained quiet; and it was only after the conclusion of the peace, that they renewed the war with Austria, which was soon terminated, however, by the glorious victories of prince Eugene, at Peterwardin, on the 5th of August, 1716, and at Belgrade, on the 16th of August, 1717, upon which Austria gained by the peace of Passarowitz, concluded on the 27th of July, 1718, the remainder of Slavonia, the Bannat of Temiswar, Western Servia, and the Lesser Wallachia.

The queen of Spain now intrigued for the acquisition of some of the Austrian possessions in Italy for her sons; but a British fleet, under admiral Byng, transported an Austrian army to Sicily, and defeated the Spanish fleet under admiral Castunada, on the 11th of August, 1718. France, then under the regency of the duke of Orleans, entered into the views of George I. of England, which occasioned the quadruple alliance between England, France, Austria, and the Netherlands, concluded at London, on the 2d of August, 1718. Austria and Spain concluded a peace in 1725; but a new war was soon excited by the contest in Poland, between Frederic Augustus VI. and Stanislaus Lesczinsky—the first of whom was supported by Russia and Austria, and the latter by France—which was terminated by the peace of Vienna, concluded on the 18th of November, 1738, by which the Polish crown was secured to Frederic Augustus; but Stanislaus was to preserve the royal title, and to obtain Lorraine, which was after his death to go to France, the duke Francis of Lorraine, the future husband of Maria Theresa, being indemnified by Tuscany. The infant of Spain, Charles, became king of Naples and Sicily, for which countries the emperor obtained Parma and Pianza.—The great object of Charles in making these sacrifices, was to preserve the indivisibility of the Austrian dominions, by procuring what is termed the *pragmatic sanction* in favour of his daughter and heiress, Maria Theresa. This sanction being obtained, and ratified by almost all the powers in Europe; he prevailed upon the electors of Bavaria and Saxony who were married on daughters of the emperor Joseph, to forego all claims upon the Austrian dominions resulting from such connexion. But the death of Charles, 20th Oct. 1740, after losing Western Servia and Lesser Wallachia in a war with the Turks, was no sooner known, than the half of Europe was in motion; the pragmatic sanction, the object of all his labours, was attacked on every hand; the very princes who had sworn to maintain it, were the first to overthrow it; and hastened like a

flock of vultures to a dead carcass, to dismember the Austrian territories, and strip the helpless daughter of Charles VI. of her paternal inheritance.

Maria Theresa.] Frederic II. of Prussia began this war, by demanding the restitution of several Silesian principalities from Austria. Maria Theresa having refused to acknowledge his right, he entered Silesia, and defeated the Austrians at Mollotwiz, on the 10th of April, 1741. This victory roused the enemies of Maria Theresa. The elector of Bavaria entered into an alliance with France and Spain, and invaded Austria at the head of a French army; and shortly afterwards was elected German emperor, under the name of Charles VII., on the 24th of January, 1742. In this oppressed situation, Maria Theresa was strongly supported by the Hungarians, whose aid she had implored, by personally addressing them in a Latin speech with her infant son in her arms,—a sight which excited the greatest enthusiasm towards her cause. In 1742, the Austrians occupied Bavaria; and Frederic having again been victorious, Maria Theresa concluded a peace with him at Berlin, on the 28th July, 1742, in which she yielded to him Silesia as an independent dukedom. The Austrians having defeated the French, occupied Bavaria, and the emperor Charles VII. transported his residence to Francfort, upon the Mayne. George II. of England defeated the French at the Rhine, and the league between Austria and England, was joined by Frederic II. in 1744. Although the Silesian contest was settled by the peace of Dresden, in 1745, the war continued in the Netherlands, Germany, and Italy, till 1748, when the peace of Aix la Chapelle was signed between England, Holland, France, Spain, Austria, Sardinia, and Genoa, chiefly upon the former *status quo*.

Germany now enjoyed eight years of peace. However, Austria could not forget the loss of Silesia, and sought an alliance with Russia and Saxony. Frederic II. having been informed by the treachery of a Saxon secretary, of the existence of a secret treaty between Austria, Saxony, and France, hastened to take the advantage of his enemies, by entering Saxony with an army, and shutting up 17,000 Saxons in the camp of Pirna, where he forced them to surrender. Some details of this remarkable war will find a more appropriate place in an historical chapter upon Prussia, and we therefore only mention here that it was terminated, after a struggle of seven years, by the peace of Hubertsburg, on the 15th February, 1763, which was concluded upon the *status quo*.

Joseph II.] The period of tranquillity from this peace to the beginning of the war of the French revolution, was full of the most beneficent consequences to Germany, in the developement of the powers of the human mind; the cultivation of the arts and sciences, the improvement of agriculture and increase of population, and the melioration of the administration of the different countries. Frederic II., and Joseph II., were distinguished by their efforts to diffuse knowledge and happiness among their subjects. Joseph had formed his mind on the spirit of the times. The enlightened views of the principles of social order, religious toleration, and the liberty of the press, which he had partly gathered in his travels, and partly acquired from the example of Frederic II. were not lost upon him. But Frederic had less formidable obstacles to struggle with than Joseph, who in several of his provinces had to contend with a powerful and privileged nobility, and a body of clergy, who, in all affairs of the Church, chose rather to turn their eyes upon Rome than on Vienna. The more clear-sighted men of his age, however, warmly seconded his views;

and we ought rather to ascribe it to the wish he had formed to give to all his States the same degree of civilization, and the same constitution, that he announced himself as an autocrat, than to more unworthy motives. Although many of his steps, it must be confessed were rash in the extreme, and liable to very great misconstruction, it cannot be denied that his object was good, while the means which he made use of, especially in the Netherlands, were arbitrary, and liable to severe censure.[20]

The extinction, by the death of Maximilian Joseph of Bavaria, on the 30th of December, 1777, of the male line of the house of Wittelsbach, reigning in Bavaria, caused the war of the Bavarian succession. The nearest heir, the elector palatine, Charles Theodor, who had no children, left the country to Austria, by a treaty, against which Frederic II., who supported the rights of the duke of Deuxponts, protested. Saxony united with Prussia against Austria, and the armies took the field, but no battle was fought in this contest, which was ended by the peace of Teschen, 13th May, 1779, by which Bavaria was secured to the elector palatine, with the exception of the Innviertel and Braunau, which Austria obtained. Saxony got a sum of money, and Prussia guaranteed the peace.

Joseph revived, in 1785, his plan for the acquisition of Bavaria, by proposing to the elector palatine an exchange with the Austrian Netherlands, which he was to hold with the title of king of Burgundy. This was opposed by Frederic II., who formed, on the 23d July, 1785, an alliance with Saxony, Hanover, and several other German States, called the union of the German princes.

The great political convulsion which broke out in France in 1788, was first felt by the Austrian Netherlands, which revolted in 1789, and under the direction of an advocate, called Van der Noot, constituted themselves into a republic. At the same time the war with Turkey—which but for the mutual jealousy of her aspiring neighbours, might have terminated in her dismemberment—took an unfavourable turn.[21] The whole political system of Europe was indeed on the eve of undergoing a great change, when Joseph II. died, and was succeeded by his brother Leopold, grand duke of Tuscany, who, to pacify the Netherlands, and to put an end to the threatening position of Prussia, consented to the conditions of the congress of Reichenbach, at which the possession of Belgium was secured to him.

Leopold.] Shortly before the breaking out of the French revolution, the German constitution, which had already shewn symptoms of decay, seemed to have obtained a new support in the union of the German princes, formed by Frederic II. against the emperor Joseph. But the new order of things commenced in France, was in Europe, and particularly in Germany, viewed in a very different light. The wise abolition of the feudal system, and the principle of unity and equality adopted in the new

[20] Joseph co-operated in the abolition of the Jesuits, effectuated by Pope Clement XIV. (Ganganelli), in 1773; he abolished 624 monasteries; on the 13th of November, 1781, he issued an edict of toleration, breathing the most enlightened spirit, by which the different religious bodies of Catholics, Protestants, and Greeks are ensured the most perfect liberty of conscience. The regulations still subsisting in Austria to prevent any encroachment of the court of Rome upon worldly affairs, may be considered as a masterpiece of legislation, on account of the clearness with which the line between religious matters, and civil and political concerns, is drawn.

[21] There is little doubt that Joseph had already turned his eye upon western Turkey. Under his active policy the imperial flag had been seen waving along the whole course of the Danube; and secret leagues had been formed so early as 1782 with the leaders of Montenegro, Albania, &c., in order to promote the ulterior views of Austria.

administration and geographical division of France operated a great change on the German States in Lorraine and Alsace, which, since the peace of Westphalia, had remained under French government, but preserving their own particular privileges. At the same instant that the French overflowed Germany, Austria and Prussia laid aside their ancient jealousy, and Frederic William, the successor of the great Frederic, had an interview at Pilnitz, with the emperor Leopold, at which a treaty was concluded, which was followed by the formation of an alliance at Berlin, on the 7th of February, 1792.

Francis II.] The death of Leopold on the 1st of March, 1792, produced no change in the political system of Germany. He was succeeded by his son Francis II. in the Austrian lands, and in the imperial dignity. A representation made by Austria to the French ministry, produced a declaration of war from Louis XVI., and the second national assembly. The German empire decided to take part in the war against France, and furnished at first the triple, and afterwards five times the contingent fixed for the army of the empire. Prussia withdrew from the coalition in 1795, and was followed by Hessen-Cassel; and peace was finally negotiated between France and Germany, at the congress of Rastadt. But Austria and Russia renewed the war with some success in Germany and Italy, until Moreau, after the battle of Novi, secured a position on the Genoese territory, and Massena, after that of Zurich, fixed himself on the right side of the Rhine. Bonaparte having returned from Egypt, defeated the Austrians at Marengo, on the 19th of January, 1800, and re-conquered Italy. In Germany, Moreau, after the victory of Hohenlinden, gained on the 3d of December, 1800, advanced to the neighbourhood of Vienna; and the peace of Luneville, concluded by Austria for itself, and in the name of the German empire, was the consequence of these decisive victories. This peace placed France in possession of all the German countries on the left side of the Rhine, comprehending also the Austrian Netherlands. In Italy, she resigned Lombardy, but was indemnified by a part of the Venetian State; and Austria gave the Breisgau to the duke of Modena, to indemnify him for his duchy which was joined to the new formed Cisalpine republic. The grand duke of Tuscany—of which country the kingdom of Etruria was now formed—was indemnified by the secularized archbishopric of Salzburg, and several other districts, which were formed into a new electorate for him. Prussia was indemnified for the districts it had lost on the left side of the Rhine. The house of Orange-Dillenburg was indemnified for the loss of the dignity of stadtholder of the Netherlands, and for their estates in Germany, by the principalities of Fulda and Corvey, with several other districts. The electorates of Treves and Cologne were abolished, and that of Mayene changed into the dignity of elective archchancellor; to whom was given Ratisbonne, Witzlow, and the principality of Aschaffenburg. Hanover received the principality of Osnabruck—in which, since the peace of Munster, it had alternately exercised the right of naming a bishop—as hereditary property. We cannot here mention all the different changes and indemnifications which took place in the smaller German countries, and which were executed under the mediation of France and Russia, by the diet at Ratisbonne. Only six of the free towns of the empire maintained their political existence, viz. Augsburg, Bremen, Frankfort upon the Maine, Hamburg, Lubec, and Nuremberg. This new order of things was

however of short duration. It was interrupted by a new war against France, in the autumn of 1805, in which Austria was allied with England and Russia. After having forced 30,000 Austrians under general Mack, to capitulate at Ulm, on the 17th of October, 1805, Napoleon occupied Vienna, and gained the victory of Austerlitz. After which, in an interview with Francis, an armistice was concluded, which was followed by the peace of Presburg, on the 26th December, 1805. Austria gave up to France the Venetian lands, and recognized Napoleon king of Italy, besides approving of all the incorporation and changes made by him in Italy. It further acknowledged the royal title given by Napoleon to the electors of Bavaria and Wirtemberg, and resigned to the former of these several towns and districts, and to the States, a part of the Breisgau, with other towns and districts. Austria was indemnified by Salzburg, for which the elector Ferdinand received Wurzburg, which was raised into an electorate.

Prussia at first remained neutral; but the invasion of its territory by a French corps, and the arrival of the emperor Alexander, had determined the king to join the coalition under certain conditions, when the battle of Austerlitz—gained before Prussia had taken any decisive step—changed the face of things. France proposed a treaty to Prussia, in which the alliance was to be renewed, and the whole of Hanover given to Prussia, in exchange for Neufchatel and some other districts. Frederic wished to conduct himself in a cautious manner towards England; but Napoleon insisted upon the immediate occupation of Hanover, and the shutting up to English vessels of the three great rivers flowing into the German Ocean; upon which Great Britain declared war against Prussia.

Rhenish Confederation.] The formation of the Rhenish Confederation with Napoleon for a protector, on the 12th July, 1806, was the cause of a fresh struggle between France and Prussia. In the Rhenish Confederation, the southern and western part of Germany separated themselves from the northern. The kings of Bavaria and Wirtemberg, the grand dukes of Baden, Hessen-Darmstadt, and all the lesser princes of the south of Germany, declared their separation from the German empire, on the 1st of August, 1806, and their union in the Rhenish Confederation, of which the elective archchancellor was named Prince Primate. Napoleon, on assuming the title of protector of the Rhenish Confederation, declared that he no longer acknowledged the existence of the German empire, but recognized, on the other hand, the full and unlimited sovereignty of the princes whose States lay in the rest of Germany. Immediately after this, the emperor Francis abdicated the title of German emperor, on the 6th of August, 1806, and declared that he considered his German countries as united to the Austrian empire.

By the formation of the Rhenish Confederation, the geographical form of Germany was altered as well as its constitution. All the lesser States of the south and west of Germany were under the sovereignty of the larger countries. The rights of sovereignty were, by the act of confederacy, vested in the right of legislation, high jurisdiction, high police, military conscription, and taxation. France promised an army of 200,000 men for the protection of the Confederacy, and the contingent of the principal members was 63,000.

After the formation of the Rhenish Confederacy, Prussia intended to form a northern union of those princes who had not yet joined the Confederacy, but the negotiations for this, and several other objects, ended in October, 1806, with a war between France and Prussia—the account

of which will be given in the history of France—which was terminated by the peace of Tilsit. During the victorious career of Napoleon in this war, most of the princes of the north of Germany joined the Rhenish Confederacy.

The war between Austria and France, in 1809, will find a more proper place in the history of the latter country. Bavaria, Saxony, and Wirtemberg, took a part in it as allies of France; and the peace of Vienna wrought new geographical changes in Germany. The kingdom of Westphalia, which had been formed by Napoleon after the peace of Tilsit, and given to his brother Jerome, was aggrandized by the incorporation of Hanover; and a considerable part of Germany, comprehending the Hanseatic towns, Hamburg, Lubec, and Bremen, united with the French empire. Saxony also was raised to the dignity of a kingdom. The approaching dissolution of the Rhenish Confederacy was not to be apprehended, when, in 1812, not only the troops of all its princes followed Napoleon into the Russian campaign, but even Austria and Prussia also joined his banners. But the retreat of Napoleon, and the alliance between Prussia and Russia, in February, 1813, which was joined by Austria, decided the fate of Germany.

After the battle of Leipsic had forced Napoleon to retreat beyond the Rhine, all the princes of the Rhenish Confederacy gradually forsook him, induced partly by free will, and partly forced by the power of circumstances. Not merely the German princes, but the nation rose *en masse* against the French, impelled by the hope of achieving their independence, and incited by the promises of the princes to give free constitutions as a reward for their exertions. The enthusiasm which animated the whole of Germany at this period, baffles description. The greatest exertions were made without complaint, by countries already exhausted by continual wars; and men of all ranks freely sacrificed wealth, influence, and repose, to gain those first of earthly blessings,—civil and political liberty. In fact it was this national enthusiasm which contributed to the fall of Napoleon; the princes by their own power could never have effected what Germany now performed.

The fate of Germany was mentioned only in general terms in the treaty of Paris; the empire was not to be re-established, and Germany was to consist of a league of independent States. After long negotiations at the Congress of Vienna, the act of the German Confederacy was concluded, of which an account shall be given in another chapter.

The fairest reward for the enthusiasm showed by the German people in freeing themselves and their princes from a foreign yoke, would have been the establishment of constitutions, securing their civil rights. The national opinion, on a free constitution—as expressed by the most eminent jurists and philosophers of Germany—demanded representative assemblies invested with true legislative power,—the judicial institution of Jury-trial independent of the government,—and the freedom of the Press. But the moment of danger past, the rulers forgot their solemn promises, and the opening words of the act of Confederacy, which at first run thus: "In all German States a representative constitution *shall exist*," were afterwards changed into the uncertain expression, "in all States of the confederacy, a representative constitution is to take place." We shall, in the course of the work mention those States which have fulfilled their promises, and those which have not yet done so. Napoleon's return from Elba, on the 1st of March, 1815, drew the Germans into a new war, which was ended

by the battle of Waterloo. The whole German Confederacy joined the Holy Alliance in 1815.

Some particulars regarding the history of the different German States after this period, will be more properly given in a short sketch at the head of their respective chapters.

CHAP. II.—PHYSICAL FEATURES—MOUNTAINS—FORESTS—SEAS—RIVERS.

THE southern part of Germany is covered with large and steep mountains, running partly from the Alps and partly from the Carpathian mountains. Towards the middle of the country they decrease in elevation till they gradually sink into the plain. From the most northern German mountains, the Harz, begins that enormous plain which stretches over the whole north of Germany, and through Russia and Poland, to the Alaunian hills in Russia. It is evident that the sea has withdrawn from this plain at a later period than from the mountainous parts of Germany; in the peat marshes and sandy districts of the level country there are indubitable proofs of this fact. The coast is there so flat that it must at many places be secured by dykes against the inroads of the sea, and the interior districts present an aspect of uniformity which contrasts strikingly with the romantic and picturesque scenery of the south. Where the ridges of the highlands flatten towards the two northern seas, most of the rivers take their source. However, the southern plateau inclines towards the Black Sea, and that of the Lower Tyrol towards the Adriatic.

Mountains.] The mountains of Germany belong to the two principal chains of Europe: viz. the Alps and the Carpathian mountains. The Alps run in several chains through the south of Germany. The Rhetian Alps proceed from the Grisons and the Tyrol. The Grossglockner, their highest point, divides them from the Noric Alps, which run through the district of the Ens into the Hungarian plains. The Alps of Trente belong to the first of these, and those of Styria to the latter. Two other chains of the Alps run in the south through Illyria: viz. the Carnian Alps, beginning at mount Tillegrino and ending at the Terklou, and the Julian Alps, which descend from the Terklou and run down to the Adriatic. The system of the Alps is the most extensive in Germany; the Rhetian and the Noric Alps, and some branches of the Carnian and Julian Alps, rise to the snow-line, and are covered with glaciers and fields of ice. Of the other lower ridges in Germany belonging to the system of the Alps, although some rise to a considerable height, none exhibit those terrific features which Nature has spread over the stupendous mountains of Switzerland and Savoy.

Unconnected with the German Alps, but a continuation of the H[illegible] vetian ridges, are the mountains beyond the Rhine: viz. the Hundsr[illegible] and the Ardennes in the extreme west, which are again connected [illegible] the Jura, and by it with the Bernese Alps.

The system of the Carpathes is less extensive in Germany, bei[illegible] limited to the Bohemian districts; it is only the roots of the Carpathian mountains, that belong to Germany; but the Sudetes, which run through Bohemia, Moravia, Silesia, and Lusatia, and down to the Danube, are lower ridges belonging to them. The Moravian mountains, the Giant

mountains, the Wohlian ridge, and the Bohemian forest mountains, which are joined by the Saxon Erzgebirge, are also connected with them, although the latter may be considered as a branch of the granitic range of the Fichtelgebirge. None of the German mountains, belonging to the Carpathes, reach the snow-line.

Forests.] Germany, the *Terra sylvis horrida* of Tacitus, like all other countries in a state of nature, was once overrun with forests. But the chief of these, for celebrity and extent, was the far-famed Hercynian forest.[22] Tacitus commences it at the Rhine, and makes it stretch in a N. E. direction through the territories of the Catti (the modern Hesse, Thuringia, and part of Westphalia, and Hanover). Pomponius Mela describes it as extending from the Rhine to the borders of Russia,—which probably comes nearest the truth, as the Polish forests are very extensive, and Poland at this day bears a near resemblance to ancient Germany, in its external appearance. The Hercynian forest was branched out into various divisions. The Latin word *sylva*, and the German word *wald*, corresponding with the old English term *weald*, denote a forest; but the term *wald* is extended not simply to woods or forests, but likewise to mountains, if covered with woods. Such tracts of country still exist to a considerable extent in Germany, and are clearly remains of the old Hercynian forest, answering to the divisions indicated by the Roman historians, as the Schwarzwald, or Black Forest, the *Sylvæ Martianae* of Ammianus Marcellinus. The Spessart and the Wetterwald in Wetteravia, mentioned by Tacitus and Claudian. The *Cæsia Sylva*, now the Hesserwald, from *Hesus*, the name of the chief divinity among the ancient Germans, in the duchy of Cleves; the Benthemerberg in Westphalia, the Grove of Tanfana, mentioned by Tacitus. The Dromlingerwald lies to the north of Magdeburg; but the Sollingerwald, the woody mountains of the Harz, the Luttenwald, and the Thuringerwald, are connected with the ancient Silesian forests, extending thence far east, through Poland and Russia, and parts of these forests are the *Sylva Cabreta* of the ancients. The Boheimerwald, or the woody mountainous forest stretching in a S. E. direction from the Fichtel-gebirge, along the S. W. side of Bohemia, till it almost touches the Danube, was properly the *Hercynia Sylva* over which the Marcomanni passed into Bohemia, as mentioned by Tacitus, where they expelled the Boii. The Odenwald, or Forest of Odin, between Heidelberg and Frankfort; the Steygerwald, between Bamberg and Wurtzburg; the Anspacherwald, between Nuremberg and the head of the Tauber, in Franconia, are all remains of the ancient Hercynian forest. The ancient superstition, which led the

[22] It has been commonly said, upon the authority of Cæsar, that this forest was 60 days' journey in length, and 9 days' journey in breadth, as if Cæsar had exactly defined its limits. Cæsar neither did nor could do this, as his information respecting was very limited, being restricted to that part of it which came nearest to the Roman province of Gaul. Cæsar's words are: "It is 9 days' journey across; we cannot otherwise describe it, because the Germans have no fixed measures of distance. It opens on the confines of the Helvetii, Numetes, and Rauraci, (Switzerland, Basle, Spires,) and extends along the Danube to the borders of the Daci and Anartes (as it is, to Upper Hungary); then turning from the river to the left, it runs through an infinite number of countries. None have ever yet arrived at the end of it, or ascertained its utmost extent, though some have gone 60 days' journey in it." Here Cæsar does not determine its length, he only says that some have gone 60 days' journey, and —as would appear from the text—without coming to the end of it. Whether this forest extended to the south of the Danube, the text gives no means of information. All that we can learn from Cæsar's description is, that it extended E., and then N. E., to an indefinite length, and that it ran through the centre of Germany.

ancestors of the modern Germans to venerate and protect woods and groves, was succeeded by a passion, still existing among the grandees, for hunting the wild boar, which has greatly contributed to the preservation of the ancient forests. The eastern part of the Hanoverian territories, adjoining the Elbe, is almost covered with woods of pine, fir, beech, and oak.

Seas.] Germany is bounded on three different sides by the ocean. The German Ocean washes the coasts of Hanover, Oldenburg, and Holstein, and forms, on the coast of East Friesland, a large bay called the Dollart. The Baltic washes the eastern coast of Holstein, Mecklenburg, and the Prussian States, forming two small bays, the Ruger Bodden and the Salzhaff. The Adriatic, on the S. E., is surrounded only by Austrian provinces. The most important sea for German commerce is the German Ocean, which receives the two rivers, the Rhine and the Elbe, and affords a communication with the great commercial States of Europe. But the Baltic is very important also to the adjoining countries, and is united to the German Ocean by a canal passing through Holstein, by means of which, the dangerous navigation through the Belts is avoided. The Adriatic is less important to the commerce of Germany; the only large river flowing into it is the Adige. In all these seas, harbours have been established, but none are fit to receive a fleet of men of war. There are 7 principal rivers, and more than 48 navigable rivers, in Germany. We shall describe them, as they lie in order, with their adjunct streams.

The Danube.] This great and noble stream, which, for continuity of course, volume of water, and political importance, may with justice be termed the prince of European streams, rises, according to the common opinion, near the little town of Donau-eschingen; and Count Marsigli has given an engraving of its humble fountain in his grand work on this celebrated river. But if geographical accuracy is to be studied at all, and if the remotest source has a just claim to the honours of the parent-stream, the small rivulet that rises in the court-yard of the prince of Furstemburg's palace, near the above-mentioned village, has no right to be called the source of the Danube. The Brigack, which rises 15 miles to the N. W. of Donau-eschingen, is joined below Villingen by another stream that rises in the vicinity of the town of St. Georgen, situated in the defiles of the Black Forest, and runs east till it meets with the Brigack, thus forming a confluent stream, before it receives the tributary stream of the Brege, or arrives at Donau-eschingen, is in fact the principal stream and remotest source. Taking, therefore, the Brigack and its sister-stream, for the true and proper Danube, the sources will be 48° N. latitude, and 8° 10′ E. longitude from Greenwich, a mile to the S.W. of the head of the Neckar; and a mile to the E. of the source of the Renchen, both of them tributaries of the Rhine. It runs almost due N. E. to Ulm, where it is joined by the Iller, coming from the mountains of the Voralberg, on the S. Here, at the distance of 100 British miles from its source, it begins to be navigable, and is successively augmented by the Lech, the Iser, the Vehls, the Altmuhl, the Nab, and the Inn, which joins it at Passau. The Inn is broader and more rapid than the Danube: its breadth, at the confluence, is 890 feet, while that of the Danube is only 780 feet, or 110 feet narrower than the former; hence it would rather seem, that the Inn is the principal stream, and for this reason the Swiss writers contend that the Inn is the finest river, and that the Danube originates in Switzerland. It rushes triumphantly across

its rival stream, and communicates its own rapidity to the Danube, preserving its waters unmixed for many miles below the confluence; the stream of the Inn being muddy and turbid, while the Danube is comparatively clear and gentle. From Passau, the Danube pursues a south-eastern course, till it arrives at Lintz, the capital of Upper Austria. In this part of its course, the banks are high, and the country flat, with high mountains in the distant view, clothed with wood. The beautiful situation of Lintz,—its fine bridge of twenty wide arches,—the magnificent church of Bostenfield,—the appearance of Upper Lintz,—the vineyards,—the cultivated fields,—the lofty Salzian Alps, in the distant horizon, covered with snow,—form one of the finest landscapes in Europe. Beyond Lintz, it receives the rivers Trauen and Ens, and pursues a very winding and irregular course, sometimes so broad as to resemble a sea, at other times broken into small streams by numerous islands. Further down the stream, the traveller has to encounter the famous waterfall and whirlpool of Stroudel, caused by a projecting rocky island rising in the middle of the stream. About a quarter of a league beyond this, is the whirlpool of the Wurbel, still more dangerous. Before the traveller arrives at Stein, he passes by the abbey of Melk, which has a grand appearance; and next sails under a natural wall of rocks, called the Devil's wall: above which are situated the rich vineyards of Spietz. The river next passes by the superb and romantic ruins of the castle of Thierstein, once the prison of the brave Richard the Lion-hearted, king of England. Beyond Stein is the vast abbey of Gottwich, situated upon a high mountain, and celebrated for its fine buildings, its ancient manuscripts, and the learning and hospitality of its monks. After passing Vienna, the Danube flows to the S. E. with a broad channel, forming an immense number of islands, one of which, that of Inder-Lobau, is famous for the bloody but indecisive victory over Bonaparte, in 1809. Before it leaves Germany and arrives at Presburg, it receives the Morau, separating the marquisate of Moravia from Upper Hungary. The Danube is very deep and rapid at Presburg, being confined within a narrow channel of 250 yards. Soon after it leaves Presburg, it enters the wide valley of Hungary, expanding to a great breadth, and running S. E. as far as Gran, forming in its progress the extensive island of Schut. From Gran to Waitzen, its course is almost due east. At this last place, it takes a sudden sweep to the south, for the space of 150 British miles, till its confluence with the Drave. During its course from Presburg to the Drave, it divides Lower from Upper Hungary. From its confluence with the last-mentioned river, it runs S.E. to Belgrade, where it receives the Save, having been previously joined by the Theysee, at Peterwaraden. From Belgrade to the Turkish fortress of New Orsova, situated on an island in the river, it runs E., dividing, for the space of 100 British miles, the Bannat of Temiswar on the north, from the Turkish province of Servia on the south. At New Orsova—opposite to which it receives the small stream of the Czerna, separating the Bannat of Temiswar from Western Wallachia—it becomes wholly a Turkish river, and receiving in the latter part of its course all the streams that descend from the extended chain of Haemus, or the Bolgan, on the south, and those which descend from the Crapack mountains on the north, as the Alauta, the Argis, the Jolonitza, the Sereth, and the Pruth, on the left, and the Morava, the Timok, the Lom, the Isker, the Jantra, and the Vid, on the right, it falls into the Black Sea, 35 miles to the east of Ismael, in long. 29° 10′ E. of

Greenwich, and lat. 45° 30′, by six mouths, or rather seven, as there is an island in the fourth branch. The Delta of the Danube commences at a small distance above the fortress of Ismael, and is 50 miles in breadth from the Vizi to the Kilia. Only two of these mouths are navigable, the rest being choked up with sand-bars. Its whole course is 1,400 British miles, without including its turnings and windings. From its source to Passau, a distance of 280 British miles, it is chiefly a Bavarian river. From Passau to Orsova, a space of 630 miles, it is an Austrian river; and from Orsova to its mouth, nearly 500 miles more, it is a Turkish river.[23]

Between Buda and Belgrade, the Danube is so broad and deep, that men of war may navigate the stream; and naval engagements have frequently taken place here between the Turks and Christians. Where there are no islands, the stream is fully a mile broad, opposite Wallachia; and between Giurgewo and Rudschuck, it is fully two miles broad, as we are informed by Dr. Clarke who crossed it at that place: and the northern branch which passes by Ismael, is deep, rapid, and 560 yards broad. Twenty British miles below the fortress of New Orsova, are the ruins of Trajan's bridge, one of the most splendid remains of Roman architecture. It was all of dressed stone, and contained 20 arches, each of them 150 feet above the level of the stream, 60 feet in breadth, and 170 feet of span, making the length 4,600 feet in whole; and was built where the river was narrowest, and of course where it was most rapid, which renders the fabric still more stupendous and amazing, on account of the almost insurmountable difficulties which must have been encountered in laying so large a foundation. The architect was Apollodorus of Damascus, who formed the square, and erected the column of Trajan at Rome. This bridge was destroyed by the orders of Hadrian, Trajan's successor, lest the barbarians on the northern banks should by means of it facilitate their incursions into the Roman provinces on the south of the river. The Danube is called the *Ister* by Herodotus, who appears to have known as much concerning the lower course of the river and its oblique direction towards Scythia, or the modern Bessarabia, as the most perfect geographer of our day, according to Major Rennel. It

[23] The most northern bend of the Danube is at Ratisbon, in 49° 3′ N. latitude, according to Thomson, and 48° 56′ according to Pinkerton and Arrowsmith; but its course on the map, after it enters the Turkish territories, is deplorably inaccurate, for the want of observations of latitude and longitude. No two maps, even though drawn by the ablest geographers, can be found to agree respecting this part of its course. According to some, the most south-eastern point is a little below Vidden; according to others at the mouth of the Alauta, opposite Nicopolis. According to Rennel, Pinkerton, Arrowsmith, and the large map of Hungary and Transylvania, the most south-east point of its course, is 44° 25′ N. latitude; according to the map published by the imperial academy of St. Petersburg, and the map of Turkey in Thomson's Atlas, the junction of the Danube and the Alauta is in lat. 43° 40′, thus making a difference of 45 minutes, or 52 British miles. By Rennel, in his map of Western Scythia, by Pinkerton, Thomson, and Arrowsmith, the most northern mouth of the Danube is in E. long. 29°, and Bender is in 29° 46′ E. longitude; while, by the Russian maps, and Guthrie's Geography, the Danube enters the Euxine in E. long. 30° 6′, and Bender is fixed in 30° 25′, or 50 miles farther east from the same meridian. The fact is, that no survey has been made of the course of the Danube from Vidden to Ismael; and till that be done, we may get new maps, but shall find the old errors faithfully copied. So faithfully indeed have errors in geography been perpetuated in maps, that the course of the Danube was, till very lately, extended 27 degrees of longitude; while it is only 22 degrees of longitude from its source to its mouth, even supposing the latter to be in 30° E. long.; and only 21 degrees, if in long. 29°. And what is worse, degrees of longitude have been identified with those of latitude, in estimating the length of the Danube, by making each of these degrees 60 geographical miles; thus extending the course to 1,620 geographical miles, or 1,860 British miles.

was at Isaksi, just above the point where the branches of the river commence, and 30 miles above Ismael, that Darius Hystaspes passed over in pursuit of the flying Scythians; but the bridge which he then laid was afterwards broken down, to prevent the Scythians from repassing the river and harassing his retreat. The Danube is liable to great inundations, particularly when the ice breaks up.

The Rhine.] The Rhine, like the Danube, is not a German river throughout: for the first sixty miles of its course, it is purely a Swiss stream. Passing through the country of the Grisons, it runs for the space of fifty miles between the Vorarlberg, the western extremity of the Tyrol, on the E., and the cantons of Glarus and Appenzel, on the W.; then turning its course to the N. W., it runs through the Lake of Constance. Hence it runs almost due W., to the city of Basle for the space of 80 miles, separating, in this part of its course, the territories of the grand duke of Baden on the north from the canton of Thurgovia on the south, and the canton of Schaffhausen from that of Zurich. At Schaffhausen, the river is near 400 feet broad; two miles and a half below, there is a cataract 50 feet in perpendicular height, and at Fauffenberg, 24 miles farther below, is another great cataract of 40 feet. Before it arrives at Basle, it receives the confluent stream of the Aar and the Reuss, and several smaller but rapid rivers from the southern side of the Schwarzwald or Black Forest; so that at Basle—where the Rhine begins its long northern course—it is a deep, broad, and rapid river. From Basle to Lauterburg, a space of 110 British miles, it forms the boundary between France and Germany. The country traversed in this part of its course may be compared to a deep valley, bounded by the Vosges on the W., and the Alps of Suabia on the E.; comprehending an extent of 50 miles of medial breadth, by 110 miles in length. From the Vosges, and the Suabian Alps, a multitude of short but rapid rivers descend in opposite directions, and swell the stream of the Rhine, as the Wies, the Eltz, the Kintzig, the Renchin and the Murg on the east: the Ills, the Zinzel; the Sauffel, the Sorr, the Motter, and the Lauter, now the French and German boundary on the west. Between Kehl and Strasburgh, there is a stately wooden bridge, 3,900 feet in length, over the Rhine. This structure is supported in the middle by an island, on which there is a strong castle. From the Lauter, as far as Cleves, the Rhine is entirely a German river, for the space of 260 British miles in direct distance. The Erlebach, the Queich, the Spirebach, the Seltz, the Nahe, with a multitude of smaller streams descending from the Hundsruck, fall into the Rhine on the western side; while on the east, it receives at Manheim the large stream of the Neckar, and at Mentz, the Maine, a still more copious river. At the confluence of the Rhine and Maine, the waters of the two rivers are distinguishable for many leagues; and the shores become grand, rich, and variegated. The Rhinegau, extending from Mentz to Bacharach, is not only celebrated for the excellence of its wines, but for the romantic appearance of the country, which is here

> "A blending of all beauties: streams and dells,
> Fruit, foliage, crag, wood, corn-field, mountain, vine,
> And chiefless castles breathing stern farewells
> From gray but leafy walls, where Ruin greenly dwells."

Hence, as far as Bonn, the shore abounds with beautiful and striking objects, the Rhine not seeming to assume all its grandeur till after its junction with the Maine. At Coblentz, it receives the Moselle, a large river rising on

the western side of the Vosges; and running a N. E. course, till at Coblentz it falls into the Rhine, which in its farther progress to the north, receives the Lahn, the Sieg, the Wipper, the Rhur, and the Lippe, from the east; and the Erfft, opposite Dusseldorff, on the west. From Bingen, at its confluence with the Nahe, the Rhine must be regarded as a Prussian river,—the Prussian territory on the west of the Rhine extending along its western bank, a space of 170 British miles, and 125 miles along its eastern bank. During the remainder of its course, from its leaving the Prussian territory, till it enters the sea at Catwyck, below Leyden, a direct distance of 100 British miles, it is wholly a Dutch river. Its length of comparative course, may be estimated thus: From its source to the confines of the Voralberg, 60 miles; from the Voralberg to the city of Constance, 75 miles; from the city of Constance to Basle, 80 miles; from Basle to Lauterburg, 110 miles; from Lauterburg to Bingen, 90 miles; from Bingen to where it leaves the Prussian dominions, 170 miles; thence to the North Sea, 100 miles; total, 685 British miles.

"The basin of the Rhine, or the country over which its branches extend, includes an area of 70,000 English square miles, and is inhabited by 14,000,000 of persons. The navigation extends without interruption to Schaffhausen, 500 miles from the sea, but above Manheim, it is much obstructed by islands and shoals. From the sea to Cologne, a distance of 160 miles, there are ten or twelve feet of water; and the river, deriving its water chiefly from the melting of Alpine snows, is deeper in summer than in winter. Cogan informs us, that from Cologne to Mentz, a distance of one hundred miles, the river is navigated by shallow vessels of 100 or 150 feet long, by 30 or 40 feet in breadth, and drawing about five feet water, which are sometimes tracked, and sometimes impelled by sails. From Mentz up to Basle, nearly the same depth might be obtained; but the numerous shoals, islands, and rocks, render the channel intricate. Were a short canal made at Schaffhausen, so as to avoid the fall, the line of inland navigation for small sailing vessels, might be extended to the head of the Lake of Constance, and the produce of the Alpine valleys of Switzerland and Bavaria, might be conveyed by water to Holland or England. Its larger branches too, the Maes, the Moselle, the Maine, the Neckar, &c. are generally navigable to some distance from the mouths. Were such a magnificent natural canal---says a writer in the *Scotsman*, to whom we are indebted for this interesting note---placed in the midst of fourteen millions of Englishmen or Americans, it would be the theatre of the most multifarious and animated internal commerce on the face of the globe. But the people want enterprise, capital, and a commercial spirit; and, what is still worse, they are parcelled out among half a score of different princes, who harass the trade of each other's subjects by imposts and retaliatory restrictions; and who all unite in oppressing the foreign trader by heavy exactions. "Nothing," says Riesbeck, "displays the constitution of the German empire in a better light, than the navigation of the Rhine. Every prince, so far as his domain on the banks extends, considers the ships that pass as the vessels of foreigners, and loads them without distinction with almost intolerable taxes. In the 12th and 13th centuries, the princes of the Rhine compelled the emperors to give them so many customs as to make every city a custom-house: originally all the customs belonged to the emperors, but the want of men, money, and other services, obliged them to part with most of them to purchase friends. While the anarchy lasted, every one took by force what was not given him by free will, and at the peace, they found means to keep possession of what they had stolen. In the small district between Mentz and Coblentz, which, with the windings of the river, hardly makes 27 (German) miles, you don't pay less than nine tolls! Between Holland and Coblentz, there are at least sixteen. Every one of these seldom produces less than 25,000 or 30,000 guilders a year." So much is trade shackled by these vexatious imposts, that the exports of fourteen millions of people by the river, amount only to six millions of guilders, or £600,000, and the imports to forty millions or £4,000,000. This is marvellously little, when we recollect that the inhabitants of Rhenish Germany are among the most industrious and civilized in continental Europe, even though we allow (what is not probable) that half of the foreign trade of the country is carried on through other channels. The exports and imports of Pennsylvania alone, with one million of inhabitants, exceed this sum. As for the internal trade, which is equally burdened with the foreign, we have no estimate of its amount; but from the scattered notices to be found in travellers, we know that it has long been in a languid and depressed state. The Hudson, flowing through a country inhabited by less than two millions of people, was navigated by 2,000 sloops some years ago. We question if the Rhine has nearly as many at this day, and no less than 78 steam-boats plied on the Mississippi at a time (1823) when a single vessel of the kind had never been seen on the Rhine.

The Ems.] The Ems is comparatively an unimportant stream, which, after rising in the bishopric of Paderborn, and running a N. W. and then a northern course of 150 British miles, falls into the sea below Embden. It is the *Amisus* of Tacitus, while Embden is the ancient *Amisia.*

The Weser.] The Weser is an important stream, dividing Westphalia from Lower Saxony. It first receives the name of Weser, where its two sources, the Werra and Fulda, join near Munden, 16 miles to the S. W. of Gottingen. The comparative length of the Weser is 270 British miles. It enters the sea, after passing by Bevern, Minden, Bremen; and has a broad and deep channel up the stream, as far as Bremen; a distance of 40 miles. Its chief tributary is the Aller, which rising in the duchy of Magdeburg, and watering the territory of Luneburg-Zell, falls into the Weser below Verden. The Weser is subject to dreadful inundations, the adjacent towns and villages then seeming to form islands in the sea, and hence its shores are deemed unhealthy. This river is the *Visurgis* of Tacitus.

The Elbe.] Going farther east, we meet with the Elbe, or *Albis* of Tacitus, a much larger, more important, and commercial river than the Weser. This river, rising in the Sudetic mountains of Silesia, runs 50 miles in a southern direction, passing by Koningsgratz and Paardubitz; thence running 70 miles in a north-western direction, it joins the Moldaw near Melnick. The Moldaw, as it is the largest and longest stream, is the principal river. It rises in the S. of Bohemia, on the mountainous confines of the Upper Palatinat; and running 40 miles to the S.E., changes its direction to the N., and after a course of 120 miles farther, meets the Elbe at Melnick. The confluent stream, under the name of the Elbe, after receiving the Eger at Leitmeritz, and running a course of 40 miles farther, enters Saxony; and passing by Dresden and Meissen, enters the Prussian territories, a little above Mulberg. Thence it passes by Torgau and Magdeburg, receiving in its progress, the Saxon Moldaw, and the Saale. Proceeding N. E. it receives the large river Havel from Brandenburg; and leaving the Prussian dominions a little above Domitsch, it divides the Hanoverian territories from the duchies of Mecklenburg and Sachsen-Lauenburg; passes Hamburg, Altona, Gluckstadt, and enters the German Ocean, in N. lat. 54° 3′. At Hamburg, though 76 miles from the sea, the Elbe is more than 4 British miles broad, including the islands; and the tide ebbs and flows twice a-day, even several miles above the city. The comparative course of the Elbe is 575 British miles. Taking the Moldaw for the principal stream, it is an Austrian river for 200 miles through Bohemia; for the next 60 miles of its course, it is a Saxon river; for 190 miles it runs through the Prussian dominions; and for the remaining 125 miles of its course runs N.W., along the borders of the kingdom of Hanover.

The Oder.] The Oder, the *Viadrus* of the ancients, rises in the mountains of Moravia, 15 miles to the N. E. of Olmutz; and running first S. and then E., separating the principality of Troppau in Austrian Silesia, on the north, from Moravia on the south, enters Prussian Silesia, after being joined by the Oppa, coming from Jagerndorf, on the N. W. and the Elsa, from the mountains of Jablunka, on the S. Thence it pursues a N. W. course, passing by Oderberg, Ratebor, Kosel, Oppelen, Brieg, Breslau, and Great Glogau. It then enters the New Marche of Brandenburg, waters the city of Frankfort, and being joined at Custrin by the Warta, a stream of equal magnitude with itself, coming from Po-

land on the east, runs N. through Pomerania, and discharges itself into the Baltic—after having formed a great fresh water lake, called the Grosse Haffe,—by three mouths, called the Divonou, Swinemunde, and Penemunde, which form the two large islands of Usedom and Wollin. All the streams that descend from the southern side of the Riesen Gebirge, the Bohemian, and the Moravian mountains fall into the Oder. The comparative course of the river is at least 400 British miles; but the Warta, or great eastern branch of the Oder, runs full 300 British miles before it joins its rival at Custrin; and as it pursues a more winding course, seems to be the longer river of the two.

The Maine.] We must not omit the Maine, which, though only a tributary stream of the Rhine, is yet of too much importance to be overlooked in the general description of Germany, as it is the grand political boundary between the southern and northern States. It springs from the lake of Fichtel on the Fichtelberg. This source is called the White Maine, while another source is called the Red Maine, from the red clay through which it flows. This last source is near Haerleinsruth, in the principality of Bayreuth. The Maine, after receiving the Rednitz and other considerable streams, joins the Rhine, to the south of Mentz, after a winding course of 250 miles.

The Adige.] The Adige, the smallest of the German principal rivers, has its own basin, but which includes only the southern part of Tyrol. It rises in the Grisons, runs through Tyrol, and only becomes navigable in Italy, where it flows into the Adriatic.

Canals.] There are but few canals navigable for large boats in Germany; but a considerable number for small ones. The principal canals are, 1*st*, The canal of Holstein, which, by means of the Eider, unites the Baltic with the German Ocean; 2*d*, The canal of Plauen from the Havel to the Elbe; 3*d*, The canal of Finow for uniting the Havel and the Oder; 4*th*, The Frederic William's Canal, from the Spree to the Oder; 5*th*, The canal of Papenburg, uniting the Ems with the German Ocean; and 6*th*, The canal of Vienna, which is intended to connect the Danube with the Adriatic, but which is not yet finished. The project of uniting by a canal the Rhine and the Danube, which was conceived, and even commenced by Charlemagne, and submitted by general Dessoles to the attention of Bonaparte, when first consul, is now reviving on the continent. By the accomplishment of this project, a water-communication would be opened between the countries of France, Germany, and Holland; and with Persia, by means of canals between the Black Sea and the Caspian. The canal is proposed to be begun at Kelheim on the Danube, near Ratisbon, where the Altmuhl falls into that river at right angles, and will form the bed of the canal.

Lakes.] Germany has a great number of inland lakes; but none of very considerable size. The largest are: the Lake of Constance, which partly belongs to Switzerland, and the Lake of Garda, which partly belongs to Italy; the Lakes of Chiem, Würm, and Ammer in Bavaria; of Traun and Halstadt in Austria; the Grosse Haffe and the Madüe in Pomerania; the lake of Ruppin in the Marche Brandenburg; the Müritz in Mecklenburg; the Duemmersee in Holstein; and the Steinhudermeer in Hanover. Small lakes and ponds are innumerable, particularly in the north of Germany.

Mineral Waters and Baths.] Germany contains more mineral springs than all the rest of Europe. The waters of Spa, Pyrmont,

Carlsbad, and Aix-la-Chapelle, are known over all the continent. Those of Aix-la-Chapelle are the most celebrated. They are divided into the Emperor's Bath, and the Little Bath; and the springs of both are so hot, that they let them cool ten or twelve hours before they use them. Each of these, and many other waters, have their partisans in the medical faculty. The baths of Ems, Wishbaden, Schwalbach, and Wildunger, are also reported to perform wonders. The mineral springs at the last mentioned place are said to possess an intoxicating quality, and are therefore enclosed. The Carlsbad and Baden baths have been voluminously described. The neatness, cleanliness, and conveniency of these places of public resort, are inconceivable: and though at the first their fitting up is attended with expense, yet they more than pay themselves in a few years, by the company which crowd to them from every quarter, for the cure of their real or imaginary ailments. The mineral waters of Selters are sent in bottles over all Germany, affording a very pleasant and healthy beverage when mixed with wine or milk; but a chemical imitation of them has now almost superseded the natural water.

CHAP. III.—SOIL—CLIMATE—PRODUCTIONS—AGRICULTURE—MANUFACTURES AND COMMERCE.

Climate.] No country in the world has undergone so great a transformation in respect of climate as Germany; and nowhere have the striking effects of civilization been more clearly manifested. In perusing the accounts which Cæsar, Tacitus, and Ammianus Marcellinus, have given us, respecting the external appearance, climate, soil, and produce of Germany, in their days, one would imagine himself reading an account of the uncleared parts of Canada. According to them, the climate was intensely cold, the country barren, uncultivated, and covered with dreadful forests and hideous marshes, at once offensive to the senses, and deleterious to the human constitution. Doubtless these accounts were greatly exaggerated, from the ignorance and imperfect knowledge of the narrators, and their prejudices in favour of an Italian clime; and that the climate was not altogether so bad as these writers affirmed, is proved by the experience of the Romans themselves, who, under the emperor Probus, introduced the cultivation of the vine, into the Roman provinces of the Upper Rhine, and the Moselle. But it required the lapse of many centuries of increasing civilization to overcome the natural asperities of this country. Germany occupies the middle degrees of the northern temperate zone; but the climate is very various on account of the different elevations above the sea, and the more or less mountainous nature of the districts; however, it is on the whole temperate and healthy. The finest and mildest part of Germany is the central region of the country, extending from 48° to 51°; in the more southern provinces, the high mountains create a cold rude climate, although the plains and valleys enjoy a very warm temperature, and an almost Italian clime. The northern provinces are colder, and more damp and unhealthy. The seasons in Germany are far from favourable for bringing the grape to full maturity, yet the vine grows to a considerable extent in the 51st parallel; and Turkish corn and spelt (*Triticum spelta*) to the same latitude. On the most southern point of the Tyrol, and on the coast in the Gulf of Venice, some olives, and other fruits of the south, ripen. Chesnuts and

almonds are found at the Rhine. Peaches and apricots are abundant under the 50th and 52d parallels, and are found in smaller quantities farther to the north. Most other fruits are grown to the extreme north of Germany, and some of them in great quantities; they become more rare towards the western coast of the German Ocean.

Vegetable Kingdom.] Germany is rich in productions of every class; those of first necessity are abundant, and many articles of luxury and comfort are produced in great perfection. Corn of all kinds, wheat, spelt, rye, barley, oats, maize, millet, buck-wheat, peas, beans, lentils, vetches, cabbage, turnips, and potatoes, have been generally introduced into Germany. With the exception of Great Britain, there is no country in which potatoes are so abundantly grown, and so generally used. The vine was widely introduced by the Romans into Germany, and is now grown at the Rhine, the Maine, the Moselle, the Danube, and many other places. The different kinds of Rhine wine are well-known in this country under the name of *hock*, a corruption of *hockheimer*, Hockheim being one of the most celebrated places for wine on the Rhine, though the chief vineyards here do not exceed 25 or 30 acres in extent. Cherries, plumbs, apples, and pears, are very abundant. Linseed, and rape-seed, (*Brassica rapus L.*) and poppies, are extensively grown for the sake of their oil. The best flax is that of Silesia, the Prussian part of Westphalia, Brunswick, and Hanover. Hemp is cultivated in Baden and Prussian Westphalia. Tobacco is grown in considerable quantity, and clover, sanfoin, lucerne, hops, madder and rhubarb. Iceland moss has been successfully reared on some of the high mountains. The forests of Germany contain very fine oaks, beeches, firs, ashes, and aspens, and many kinds of hard wood which take a very fine polish.

Agriculture.] Germany is entirely an agricultural country; and most of the branches of agriculture have been brought to a high degree of perfection in various districts, and are daily advancing. The whole north of Germany consists of an almost uninterrupted corn-field, with the exception of the heath of Luneburg and the great moors of Westphalia. In general, agriculture is carried on by alternate sowing and fallowing. Mecklenburg, Holstein, Brunswick, Hanover, Saxony, and some districts in Franconia, are most advanced in agriculture: although Nature rewards the toils of the husbandman with richer harvests in the more fertile plains of Bavaria, Moravia, and some parts of Westphalia. The plough is almost every where used; only in the mountains of Tyrol and Salzburg they are obliged to work the soil with the hoe.

Animal Kingdom.] The genuine German horse is not handsome, but he is vigorous, and has been crossed with nobler breeds, great attention having been paid of late years by the German nobility to the rearing and training of these animals. The horses of Mecklenburg are the finest; those of Holstein, East Friesland, Oldenburg, and Luneburg, are esteemed In Mecklenburg, and in some other parts of Germany, several large studs have been established, in which the breed has been ennobled by English full-blood horses, and even by Arabians. Asses are employed in several parts of Germany. Mules are not often met with in the north, although there is a stud established for them in Hanover; they are more frequent in the Alps of the Tyrol, where they are used as beasts of burden. The finest cattle are those of East Friesland, Oldenburg, and Holstein. The Hungarian breed of cattle in Styria are also very fine, but more valuable as furnishing excellent meat than for the richness of their milk. In the

south of Germany the best cattle are of Swiss breed. Besides the common German sheep, we here find the *haidschnuck*, a small kind with coarse wool, but easily supported on the heath, particularly on the barren plains of Luneburg, and the Moravian breed. In many provinces of Germany, as in Saxony, Silesia, and Mecklenburg, the common breed has been crossed with the Merino. Goats are found in all parts of Germany. There are three different breeds of swine: viz. the long white or spotted, the short white or black-spotted, and those with yellow spots. Game is not quite so plentiful in Germany as formerly; but there is still a great quantity of all kinds in the large forests. The chamois is found in the Noric and Rhetian Alps. Foxes, martins, weasels, pole-cats, and wolves, frequently descend from the Ardennes into Silesia and Moravia; bears yet inhabit the Alps of Styria, Illyria, and Tyrol, and sometimes wander as far as the Sudetes, but they are of a small species; wild cats are common. The *hamster*, a large species of field-rat, frequently commits great devastations; mice are also very numerous. In the plains of Northern Germany a great number of geese are reared, which are turned to good account in the household, the peasants frequently pickling or smoking from 50 to 100 of them for their winter-provision. Of other fowls there are turkeys, hens, ducks, and pigeons. Few countries, indeed, are so rich as Germany in birds of all kinds. Bustards inhabit the middle and southern provinces; blackcocks, partridges, hazel-hens, heath-cocks, several kinds of wild pigeons, and quails, are found in almost all parts of Germany. Pheasants are numerous, particularly in the parks of the nobility, where preserves are made for them. Of smaller birds there are blackbirds, thrushes, and larks, the latter of which are caught in great quantities in nets, particularly around Leipsic. Wild geese and wild ducks are very frequent. The stork builds its nest upon the roofs of the villages in the north; and the peasants, who consider it as a bird of good luck, never destroy its nest, but on the contrary often place materials within its reach, and assist it in the construction of its dwelling. Herons, several species of eagles, vultures, owls, ravens, and rooks, besides almost all the European singing birds are found in Germany; nightingales are numerous. On the coasts of the sea, in the rivers, and inland lakes and ponds, there are a great number of fishes, particularly in the Rhine, the Elbe, and the Weser; lampreys, soles, herring, salmon, eel, perch, trout, and pike, are the principal species. The common river-turtle is found in some parts of the south; frogs are eaten in some districts. The silkworm is reared in the south of Tyrol.

Mineral Kingdom.] Pebbles, crystals, amethysts, topazes, and garnets, are abundant, particularly in Bohemia. Chalcedony, agate, chlorite, serpentine, limestone, slate, beautiful marbles of at least 300 different kinds, alabaster, boracite, granite, gneiss, mica slate, porphyry, and sandstone, are among the mineral treasures of Germany. Salt is produced in great abundance, also saltpetre, sulphur, naphtha, and coals. Of metals there are gold in very small quantity, silver, quicksilver, copper, iron, lead, tin, galena, antimonium, cobalt, and arsenic.

Mines.] The mines of Germany are very productive, particularly those of the Erzgebirge, the Harz, the Sudetes in Bohemia and Silesia, and some of the Alps in Austria and the Westerwald. The greatest attention is paid to the working of the mines, and we believe that in no country is mining carried on in so scientific a manner.

Manufactures.] The rich materials which Germany offers for national industry have not been neglected, and that country may at this moment be placed next to Great Britain, the Netherlands, and France, in respect of national industry. After that the great sway which the Hanseatic towns exercised in the middle ages over the industry and commerce of Europe had been overturned, Germany became entirely dependant upon foreign supplies. The English, Dutch, French, and Italians, for many years supplied the German markets; but towards the latter part of the 18th century, the liberal measures pursued by Joseph, and Frederic II., revived the national industry, and gave a new impulse to trade, which was greatly benefited afterwards by the momentary stagnation which the French revolution caused in the manufactures of that country, and still more by the continental system of Napoleon which forced the Germans to produce for themselves those articles with which they had hitherto been supplied by Great Britain. The cotton manufactures in particular advanced very much in Saxony, and in the Prussian possessions; but they have again declined since the opening of the market to the English, who are able, by their superior machinery, to furnish soft goods much cheaper than the German manufacturer. On the other hand, the continental system exercised an evil influence upon the most important of all German manufactures,—that of linen. Germany formerly supplied not only almost all the British, Spanish, and Portuguese colonies with coarse linen, but even furnished the yarn for a great number of English manufactures. During the continental blockade, necessity forced Great Britain to establish manufactures of coarse linen in Ireland, and to increase the growth of flax in England, Ireland, and Canada. The plan has succeeded, and Ireland now furnishes those colonies in which Germany found its best market. The principal varieties of German manufacture are, linen, wool, cotton, silk, leather, iron, and steel, brass, silver, earthenware, china, glass, bitumen, vitriol, and other chemical articles, paper, tobacco, sugar, madder, wax, oil, beer, spirits, and vinegar, musical and mathematical instruments, watches, wooden-ware, artificial flowers, potash, tar, pitch, turpentine, soap, and gunpowder.

Commerce.] Germany is advantageously situated for commerce: lying in the centre of Europe, bordering on the north upon two seas, and in the south upon another which opens the communication with the East, and intersected by a number of navigable rivers, it seems by nature destined for a large commercial State. There was also a time when its fleets covered the sea, and when the commerce of almost the whole of Europe was in its hands. That this is no longer the case, and that Germany now occupies only a subordinate station among the commercial nations of Europe, is to be attributed to its decline from a powerful and united empire into a league of many petty States. Commerce requires the application of united powers to one common end; but instead of this, we everywhere perceive in Germany the contest of opposing forces,—every State looks only to its own interests. There is not a river in Germany which can be navigated for a few miles without the impost of numerous tolls; not a high-road good or bad, on which taxes are not levied; everywhere commerce is checked by customhouses, excises, regulations and all those shackles by which a blind and miscalculating policy ruins what it is endeavouring to protect. Notwithstanding, however, of all these hindrances, the external as well as internal commerce of Germany is of great importance. The first is carried on by sea and by land, particularly by the

three Hanseatic towns, the Prussian, Danish, Mecklenburg, and Hanoverian seaports, and one Austrian port on the Adriatic. The internal commerce by land, is with all the countries by which it is surrounded as far as Turkey and Russia. The internal commerce is partly carried on at great fairs, and partly by purchasers in the manufacturing districts. The articles of exportation are corn, linen, iron, lead, wool, worsted; cotton and worsted cloth, metals, quicksilver, glass, mirrors, horses, salt, china, honey, wax, sheep, sulphur, vitriol, pewter, wine, and fruit. The articles of importation, are silk, cotton, coffee, sugar, spices, indigo, cochineal, drugs, the fruits of the South, olives, oil, wine, cheese, and jewellery. It is difficult to say, if the balance of commerce be in favour of Germany or not: it is probable that it is not, but on the other hand the transit of goods offer so many advantages, that it probably makes up for the deficit; and besides the circumstance that some of its rulers are in possession of considerable domains and sources of revenues out of Germany, has put a greater mass of ready money in circulation here, than in any other country of Europe. The ready money in circulation in Germany is estimated at 500 millions of florins, of which, by far the smaller part circulates in the German States of Austria.

Monies.] A great many different coins are used in Germany, which is a considerable annoyance to travellers and merchants. In the north accounts are kept in rix-dollars, in the south in florins, and in some of the free towns in marcs, which is an imaginary money. Of gold coins there are Caroluses, Frederics, and ducats.

CHAP. IV.—INHABITANTS—NATIONAL CHARACTER—RELIGION.

The mass of the inhabitants of Germany consists of two principal races: viz. Germans, who originally belonged to the country between the German Ocean, the Elbe, and the foot of the Alps, but who have afterwards spread out into most of the provinces beyond the Elbe; and the Slavonians whose primitive seats were beyond the Elbe, and who yet form the mass of the inhabitants in many provinces in the east of Germany.

1*st. The Germans.*] The Germans may be again divided into two principal tribes: viz. the *Upper Germans*, who occupy the whole south of Germany, Upper Saxony, Franconia, the countries of the Rhine, Hesse, Suabia, Tyrol, Bavaria, Austria, Bohemia and Silesia; and the *Lower Germans*, who have extended over the whole of Westphalia, Lower Saxony, Holstein, Mecklenburg, Brandenburg, and Pomerania, and of whom the *Frises* are a branch. These two tribes are less distinguished from each other by physical features than by character, and by dialect. However great the diversity of provincial character in Germany may be, there are certain natural features in which all Germans agree. The physical organization of the German is like his climate,—a medium between roughness and softness; he unites the strength of the North with the fire and energy of the South. The Germans eat more than their southern and western neighbours, but they are, like the English who resemble them in this respect, one of the most vigorous nations in Europe, and frequently live to a great age. The reproach of drunkenness once applicable to the Germans is no longer just, and intoxication is rarer in Germany than among the English and their eastern neighbours.

although they are not in this respect so abstemious as the Italians. The German character is distinguished by habits of reflection which frequently approach to a phlegmatic disposition. Sincerity and a highly upright mind have always been considered as leading features in the German character, which also usually exhibits a delicate feeling of honour. Even in prosecuting his resentments the German proceeds openly and without malice. The Germans are distinguished by an insatiable thirst for information, which their general acquaintance with the languages of Europe enables them to gratify more extensively, perhaps, than any other people. It has been alleged, indeed, by some of their own authors, that the Germans have so little national pride as to give an undue preference to every thing in the shape of foreign literature, but from such a charge we are fully disposed to acquit the general body of the nation. We shall give Madame de Stael's epitome of the German character, as it is concise, expressive, and, as far as we can discern, fair and just. "The Germans are a just, constant, and sincere people; with great powers of imagination and reflection; without brilliancy in society or address in affairs; slow, and easily intimidated in action; adventurous and fearless in speculation; often uniting enthusiasm for the Fine Arts, with little progress in the manners and refinements of life; more capable of being inflamed by opinions than by interests; obedient to authority, rather from an orderly and mechanical character than from servility, having learnt to value liberty neither by the enjoyment of it, nor by severe oppression; divested, by the nature of their governments, and the division of their territories, of patriotic pride; too prone, in the relations of domestic life, to substitute fancy and feeling for positive duty; not unfrequently combining a natural character with artificial manners, and much real feeling with affected enthusiasm; divided, by the sternness of feudal demarcation, into an unlettered nobility, unpolished scholars, and a depressed commonalty; and exposing themselves to derision, when, with their grave and clumsy honesty, they attempt to copy the lively and dexterous profligacy of their southern neighbours. In the plentiful provinces of southern Germany, where religion as well as government shackled the activity of speculation, the people have sunk into a sort of lethargic comfort and stupid enjoyment; it is a heavy and monotonous country, with no arts, except the national art of instrumental music,—no literature,—a rude utterance,—no society, or only crowded assemblies which seem to be brought together more for ceremony than for pleasure; an obsequious politeness towards an aristocracy without elegance. In Austria, more especially, we see a calm and languid mediocrity in sensations, emotions, and desires; a people mechanical in their very sports, whose existence is neither disturbed nor exalted by guilt or genius, by intolerance or enthusiasm; a phlegmatic administration inflexibly adhering to its ancient course—repelling knowledge, on which the vigour of States must now depend; great societies of amiable and respectable persons;—which suggests the reflection that in retirement monotony composes the mind, but in the world it wearies the soul. In the rigorous climate and gloomy towns of Protestant Germany only, the national mind is displayed. There the whole literature and philosophy are assembled. Berlin is slowly rising to be the capital of Protestant Germany. The duchess of Saxe Weimar, who compelled Napoleon to respect her in the intoxication of victory, has changed her little capital"

into a seat of knowledge and elegance, under the auspices of Gœthe, Schiller, and Wieland. No European palace ever assembled so refined a society since some of the small Italian courts of the sixteenth century. It is only by the Protestant provinces of the North that Germany is known as a lettered and philosophical country."

The German though attached to his country, has much more of the Cosmopolitan about him than the Englishman. For many centuries Germans have been denizens in the midst of foreign and very different tribes, in Pannonia, Dacia, Sarmatia, and on the shores of the Baltic, and everywhere in their most remote descendants the Germans are to be recognized. The number of the inhabitants of Germany of the German race, will be about 24,700,000, or about five-sixths of the whole population. Besides these, the Gotschewerians, a tribe of 44,000 individuals settled in the Illyrian government of Laibach, undoubtedly belong to the German race.

2d. The Slavonians.] The second principal tribe of Germany, the Slavonians are settled on the eastern districts of the Elbe, and amount to about 5,040,000 individuals. They are divided into several tribes, each speaking its own dialect. The principal are: 1*st*, the *Slawaikes* to whom belong the *Hannacks* and *Hosacks*; they are settled in Moravia, and amount to about 1,150,000. 2*d*, The *Tscheches* in Bohemia and Moravia, amounting to 2,200,000 heads. 3*d*, The *Poles* in Silesia and Auschwitz, amounting to 820,000; 4*th*, the *Wendes* and *Sorabes*, settled partly in Illyria, partly in the kingdom of Saxony, in Brandenburg, and in the Silesian districts of Liegnitz, and amounting to 790,000. 4th, The *Casubes* in Pomerania, estimated at 56,000; 5th, the *Usckochs*, with some Croats, Raizes, &c. in Illyria, amounting to above 22,000. The Slavonians are far behind the Germans in civilization; they are however an industrious and laborious people.

Besides these two principal races, there are about 175,000 Italians in the Italian Tyrol, Frivoul, and Trieste; about 20,000, or 25,000 French, Walloons, and Waldenses, partly in the west of Germany, particularly around Landau and Saarlouis, and partly in colonies and in families spread over the whole of Germany; and also 250,000 Jews extended over the whole of the country.

Religion.] With respect to religion, the great mass of the inhabitants of Germany are divided into Catholics and Protestants. Till 1517, universal Germany professed Roman Catholicism, but since that time a considerable part of the nation have professed the doctrines of the Reformation. All those not adhering to the Catholic church, the Lutheran, or the Reformed church, are comprehended under the general name of the Evangelical or Protestant church. 1*st*. The Catholics form the majority of the inhabitants in the Austrian States, in Bavaria, Baden, Luneburg, Hohenzollern and Liechtenstein, there is also a large number of them in the Prussian States, Wirtemberg, Hessen, and Hanover, and smaller numbers in the other States; they may, on the whole, amount to 18,016,000 individuals. We shall notice the different church-establishments under the heads of the different States. 2*d*. The Protestants of the Lutheran and Reformed creed have in most States of Germany come so near to one another, that they have united in one and the same church; they amount to about 12,030,000 individuals, and form the majority in the Prussian States, in the royal and ducal Saxony, in Hanover, Wirtemberg,

Hessen, Holstein, Brunswick, Mecklenburg, Oldenburg, Anhalt, Schwarzburg, Reuss, Leipsic, Waldeck and the free towns.[25] Besides these there belong to the Protestant church about 28,000 Moravians, and Hussites. There are 5000 Mennonites, particularly in the Prussian States, in Hanover, and Hessen; some Greeks; and 250,000 Jews, with less or more restrictions in the different States, except in the Prussian countries where they are truly considered as citizens of the State, and invested with political rights. The utmost religious toleration is every where permitted in Germany, not only by the government, but also in social and individual intercourse and connexions. The Lutherans while they steadfastly adhere to their leader, in the doctrines of consubstantiation, and justification by faith, have generally deserted him in the more peculiar doctrines of Calvinism, in maintaining and asserting which, Luther used much stronger language than Calvin himself, as may be seen in his celebrated treatise against Erasmus, concerning free will. During the last century, a considerable change of religious sentiment took place in Protestant Germany, from an unhallowed rage of philosophizing, which had infected the German universities, and rendered them hotbeds of the most refined and romantic speculations. Socinianism has made great progress amongst the Lutheran and Calvinistic branches of the Protestant church, and has paved the way for what may be called Christian Deism, or *Antisupernaturalism*, as it is denominated by the Germans. Reason has been set up as the sovereign tribunal by which the Bible and its doctrines, with its recorded miracles, must be tried; and its authority is recognised or admitted only where it can be bent into a conformity with the uncertain science of metaphysics. In fact, both Calvinists and Lutherans, have undergone a mournful transformation in Germany,—the Lutherans especially, who are divided into two parties, denominated the old and the new Lutherans, which last hardly retain any thing of Luther but the name. A frenzy for religious and political innovation had prevailed greatly in Germany long before the French revolution, and passed under the names of *Illumination* and *Philanthropism*. The chiefs of this new religious school were Steinbardt, Semler, Bahrdt, Basedow, Eberhard, Eichhorn, Damm, Teller, Nicolai, and Jerusalem. To the new apostles of

[25] The *Allgemeine Kirchen Zeitung* of 4th September, 1827, contains the following statement of the number of Protestants living in Germany under Catholic Princes, and of Catholics under Protestant Princes:—

I.—PROTESTANTS UNDER CATHOLIC PRINCES.

In Austria.	
In the country below the Ems	4,300
Above the Ems	24,700
In Styria	2,500
In Illyria	17,000
In Bohemia	50,000
In Moravia	68,000
Total in Austria	166,500
In Bavaria	1,100,000
In Saxony	1,420,000
In Anhalt Koethen	34,000
In all	2,720,500

II.—CATHOLICS UNDER PROTESTANT PRINCES.

In Prussia	3,250,000
Hanover	250,000
Wirtemberg	470,000
Baden	800,000
Hessen-Cassel	106,000
Hessen-Darmstadt	165,000
Holstein-Lauenburg	1,000
Luxemburg	285,000
Saxe-Weimar Eisenach	10,000
Saxe-Meiningen	300
Saxe-Altenburg	100
Saxe-Coburg Gotha	200
Brunswick	2,500
Mecklenburg-Schwerin	1,000
Mecklenburg-Strelitz	60
Oldenburg	75,000
Nassau	150,000
Anhalt Dessau and Bunburg	100
Hessen-Homburg	5,000
Frankfort	6,000
Hamburg	5,000
Total	5,528,000

Germany may be added, the infamous Anacharsis Clootz, a Prussian by birth, who figured in the French revolution. "It is a common theory among the Germans," says an accomplished scholar and warm admirer of German philosophy and literature, "that every creed, every form of worship, is a *form* merely; the mortal and ever-changing body, in which the immortal and unchanging spirit of religion is, with more or less completeness, expressed to the material eye and made manifest and influential among the doings of men." Such are the melancholy fruits of German illumination.

CHAP. V.—LANGUAGE—LITERATURE.

Language.] CORRESPONDING to the two principal branches of population, there are also in Germany two principal languages, totally different from one another, and subdivided into various dialects.

1*st. The German.*] The German, which is a branch of the ancient language of the Germans, is divided into three principal branches. *The Northern*, the present German language called *Deutsch* by the natives, and the *Mösiac*. To the northern branch belong the Scandinavian languages, or the Swedish, Danish, and Icelandic. To the German or Deutsch tongue belong the Franconian and Alemannian, from which are derived the Suabian of the middle ages, the High German, the Cimbrian, the Saxon—the parent of the Anglo-Saxon, the root of the English,—the Low Saxon, Low German, and the Dutch. From the Mösiac and Mösogothic arises the language of the Uhlans in the Crimea.

The German language presented in very early times two primitive dialects, the southern and the northern, each of which are now subdivided into various dialects. Although the words and grammatical forms of these two dialects differ in many respects, they are essentially the same language, and follow the same rules. Nothing certain is known about the origin of the German language. Some derive it from the Indian, others from the Persian, and others assign to it a common origin with the Greek. Morhof even derives the Greek from the most ancient German. That the German is an unmixed mother-tongue, that is, one which has not been essentially formed upon the basis of any other, is clear from a comparison of it with other languages, and also from Adelung's observation that in every genuine German word the accent lies on the root. Unfortunately we have only isolated words of the ancient German remaining, which for the most part are proper names; but even these few are sufficient to convince us that at a very early epoch the language had all the roots which it now possesses. Foreigners, who are either too lazy or too proud to learn it, or who are accustomed to a softer pronunciation, generally censure it as a rough and barbarous language. The French pronounce it a language utterly unfit for gentlemen, and fit only to be spoken by mechanics. In the judgment of Voltaire, it is the most barbarous language under heaven. He observes, in his sarcastic manner, that if he were called upon to confer with men of science, he would use the English in preference to every other language; if he were to address a gentleman, it would be in French; to his mistress, he would speak Italian; to his dog, he would speak Dutch; and to the devil, he would address himself in German. Pomponius Mela, the ancient Roman geographer, observed, that German names were not fit for Roman

mouths; and hence it is, that we meet with such monstrous words in Roman authors, when they attempt to give German names Latin inflexions.

What is termed erudition, or a profound acquaintance with dead and foreign languages, had long been peculiar to this country; whilst the vernacular language seems to have been totally neglected, as unworthy of cultivation, till the middle of the 18th century. Until that period Latin, and Latin only, was the vehicle of all literary communication; so that by constant and uniform practice, the German literati attained the talent of writing with an ease and elegance in Latin unknown to other nations. It was a singular circumstance, that a nation pre-eminent in literature, and possessed of every qualification to attain excellence in that pursuit, should have remained so long without a literature of its own; and that a country which had produced a Guttenberg, a Copernicus and a Kepler, a Luther and a Leibnitz, had no writer in her own language to proclaim her fame to surrounding nations, whilst the national literature of Spain was known through the medium of a Cervantes, a Lope de Vega, and a Calderon,—that of Portugal by a Camoens,—and Britain, France, and Italy, had each attained the summit of celebrity in national literature. It is undoubtedly true, that the German by no means abounds in pleasing sounds; that it is rough, guttural, and inharmonious, and more fitted for war than courtship. It was also the peculiar misfortune of the German language, that it had not been made to pass through the crucible of literary refinement; that no attempts had been made to polish it; and that it was not till very recently the language either of German courts, or even of refined German society. Yet like its sister-dialect, the English, the German is undoubtedly capable of classical polish. But while England enjoyed a brilliant court, a splendid capital, and a succession of national classical writers who contributed to soften its asperities, to give energy and dignity, precision and perspicuity to the national language, Germany enjoyed no such privileges. French was the language of all its courts; and the number of these in Germany rendered this circumstance almost equivalent to the exclusion of the German language from all polished society, so that it was left to be the mere instrument of the most vulgar intercourse of life. The great Frederic showed the most public and marked contempt for the language of his native country and his own subjects, and a decided predilection for French, which he not only introduced at court, but caused to be employed in all acts of State, and to be used in all public offices: by his patronage of French philosophers and poets, he in fact did every thing in his power to Frenchify his subjects. For this unpatriotic and unnatural preference of a foreign language to German, he justly incurred the censure and resentment of the German literati, who felt indignant at the insult thus thrown upon their vernacular language. The successor of Frederic, however, acted a more patriotic and honourable part, in showing a marked preference for his native tongue. "Germans we are," said he, in council, "and Germans I intend we shall continue;" and in proof of his determination, he gave orders that the German language should be restored to its proper rank, and patronized men of merit who wrote in it.

The Saxon is the purest and most polished dialect of the German language, whilst that of Austria is the most rude and barbarous. Luther's version of the Bible forms an important epoch in the history of the German language. It was one of the innumerable blessings which the Refor-

mation conferred upon the north of Germany, that it rendered reading in that language popular, and accustomed the people to weekly attempts at some sort of argument, or declamation, in their native tongue. The vigorous mind of the Saxon reformer gave to his translation an energy and conciseness, which made it a model in style, as well as an authority in language. We need not, therefore, wonder at the superiority of the Saxon dialect over the Austrian, and the great difference between the German of the Catholic and Protestant States. The multiplicity of independent principalities, and the blending of a confused assemblage of different tribes, under the common name of Germans, has given rise to a great many dialects of German, so that it is with considerable difficulty that the people of one State or province understand those of another. But this need be no matter of surprise, when it is considered, that in France, polished and civilized France, which enjoyed the united advantages of the munificent patronage of a brilliant court and the efforts of a crowd of academicians to give polish to its language, upwards of thirty provincial dialects still exist.

Of the two principal dialects now spoken in Germany, the *High German* is commonly understood when we speak of the language in general: as it is the written language, and is spoken by all the educated classes over the whole country, although with peculiarities in the pronunciation, the common people especially speaking this dialect with many corruptions. The other and quite distinct dialect, the *Low German*, may be divided into two branches: 1*st*, the *Frisish*, spoken on the coasts of the German Ocean, and 2*d*, the properly so called *Low German*, now in use in Westphalia, in Mecklenburg, Brandenburg, and Pomerania. Three qualities may be considered as distinctive of the German language; its almost inexhaustible power to form new words and compounds,—its richness, for the total number of German words exceeds that of any other living language,—and its flexibility in embracing the spirit of all other languages. No nation can boast of so many faithful translations as the Germans possess; and these not only of the Greek and Roman classics—among whom the poets have been translated each in his particular kind of verse—but also of the best modern works of all nations. We shall here only quote the translations of Homer and Virgil by Voss, and that of Shakspeare by Schlegel, in which the literal meaning of almost every word of the original is given in the same quantity or kind of verse, and which yet present most elegantly written works. We have already spoken of the Slavonian language in our account of Russia, and shall take some further notice of its different dialects, in treating of the topography of the provinces in which they are spoken. The French is understood at least, if not spoken, by almost all educated persons in Germany. It is also the general language of diplomatists. A taste for the English language and English literature is rapidly increasing in Germany.

Literature.] Germany may be placed among the most enlightened and civilized countries of the earth. Although it has not arrived at a national unity, and has always been parcelled out into small States, it is just this division which has exercised a happy influence on its civilization. German literature has not been fostered into strength by high patronage; it is eminently the work of the people, and therefore exhibits a diversity of intellectual views and a cosmopolitical spirit, to a degree unexampled in any other nation. Germany has no capital, in which all that is beautiful

and noble and refined is concentrated, and which thus boasts a monopoly of social and literary elegance; it has no national academy to fetter the progress of the independent spirit, or decide the direction which gifted minds must pursue in their aspirations after fame and influence; and no part of the nation is excluded from the fullest co-operation in the great work of intellectual improvement. The German authors are distinguished by literary industry and laboriousness, by a great sagacity and spirit of invention, by deep reflection, and a constant striving towards the highest point which is to be reached by scientific pursuits. A kind of commercial intercourse has existed among the literati of Germany for upwards of two centuries; a reading spirit pervades all ranks of society; education and instruction have been brought to a high degree of perfection; and enlightened views have penetrated even into the lower classes. Until the end of the 18th century, the south of Germany had remained considerably behind the north with respect to literature; but since the first decennium of this century, the light has also dawned over these provinces, and the flowers of literature, already quite unfolded in the north, begin to bloom in all their beauty in the south.

As a national literature can only begin to exist when national civilization is already in an advanced state, it is easily to be conceived, that few traces of German literature are to be found before Charlemagne. Christianity was spread in Germany by Bonifacius, and the first writers were priests. Bishop Ulphilas's translation of the four evangelists into the kindred Mösogothic language, is the most ancient written monument of the Germans. Of a collection of early songs of the German bards, made, as it has been said, by Charlemagne, no traces have been found. The first epoch of German literature may be extended to the Suabian emperors and the age of the Minnesingers; consequently from 768 to 1137. To this epoch belong the chronicle writers, Eginhard, Witichind and, Bruno; the philosophical writers, Alcuin and Rhabanus Maurus; and, above all, Ottfried von Weissenburg, whose metric translation of the four evangelists is admirable for its fidelity. Under the Saxon kings from 919, especially under the three Ottos, and under the Franconian emperors from 1024, German civilization rapidly advanced. In the 10th century there existed several distinguished schools in Germany, which were provided with libraries. A new epoch begins with the Suabian dynasty in 1138, and extends to the Reformation in the beginning of the 16th century. The social state of Germany, the manners, and even the climate had been improved by the progress of civilization, which had dried up marshes and ditches, and converted the ancient forests and wildernesses into the abodes of men: the intercourse with Italy and other countries, the foreign manners brought into Germany by the crusaders, the better models which were obtained from foreigners, and the noble emulation they excited, now began to work a salutary revolution in the national mind and taste; manners and customs became more refined by the spirit of chivalry, ideas were enlarged, and Germany gradually became possessed of all that is required for the foundation of a national literature, the dawn of which now appeared in Suabia, including a part of Switzerland. This is the age of the *Minnesingers*, or 'bards of love,' as they chose to name themselves, who were afterwards succeeded by the *Meistersingers*, under whom poetry began to decline.[26] The romantic poetry which the

[26] With the German romantic poetry, which is powerful and harmonious, the national literature may truly be said to commence; but the two oldest national poems

Germans received from the Provenzales, flourished under the Suabian emperors, and was enthusiastically cultivated by the Minnesingers. The romantic enthusiasm of the Provenzales found easy access to German minds in songs of which gallantry, love, fidelity, and friendship were the leading topics; while the spirit of romance brought by the crusaders into Germany, and that poetry in which this spirit revelled, favoured by the Suabian emperors, recommended itself to the higher ranks of society. The Minnesingers soon spread over all Germany, and composed not only lyric songs, which were distinguished by their loveliness, depth of feeling, and delicacy, but also several romantic epic poems. The eldest of these poets we know of is Henry von Veldeck, who flourished about the year 1180; Walther von der Vagelweide, Reimar von Zweter, Wolfram von Eschenbach, Heinrick von Ofterdingen, and many others, all of whom lived towards the end of the 12th or beginning of the 13th century, were highly distinguished. The author of the Nibelungenlied has not been determined. The richness of the middle ages in romantic poetry was so great, that those poems which have been preserved to us, form by far the smallest part of it. The most important collection, containing between 1400 and 1500 poems, by 136 poets, was formed by Rudger Manesse of Zurich, in the beginning of the 14th century, and consequently at the end of the flourishing epoch of the Minnesingers. Tieck and other German scholars have published several collections taken from Manesse and other sources. At this epoch the Germans turned their attention to arts and laws. The Roman law was introduced into Germany in the 11th century. The Sachsenspiegel was collected between 1215 and 1218 by Epko von Repgow; and the Schwabenspiegel about the same period. To this epoch also belongs the universal history of bishop Otto von Freisingen, who died in 1146, and his history of Frederic I.; the works of Henry von Herford, who died in 1370; and those of Gobelinus Persona, who died in 1420; besides several others in Latin, and the chronicles of Jacob von Königshofen, Johann Botte, and others in German. Philosophy was now studied, in the philosophical writings of the ancients and the Arabians which were now copied and translated. After the beginning of the 13th century, several Germans rose into distinguished notice, among whom was the Dominican Albertus Magnus, from Lauingen upon the Danube, who died in 1280. He taught philosophy at Paris and in several German towns, and made also many researches in natural philosophy. As a theological writer, the mystic John Tauler, who died in 1361, is remarkable. At the end of this epoch, mathematics, astronomy, and mechanics, were much studied in Germany, and several important inventions introduced. The scarcity of books, and their high price, had been hitherto a great check upon literature; which was also greatly impeded by the restricted state of the schools, the distracted state of society, and the monopoly of science by the monks and clergy. But in the 14th century several universities were founded, and the invention of

which are known, and which have lately been published, are of a much earlier epoch than that of which we now speak, antiquarians assigning them to the 8th century. Among all the poems of that time when the Franconian dialect prevailed in Germany, the epic poem called the *Nibelungenlied* (the latest version of which is of the end of the 12th, or beginning of the 13th century, and is according to Grimm, only a rifacciamento of a much earlier work,) is the most remarkable, and has in regard of nationality been compared with the Iliad. To the original German poetry arising from popular tradition belongs also the collection of old heroical songs and ballads called the *Heldenbuch*, or 'book of Heroes.' The poems of the war of Troy, of Alexander the Great, and of the Round Table, came from abroad, especially from France.

the art of printing in the 15th exercised so powerful an influence upon civilization, that from that time a new era of literature may be dated.[27] The fall of the Grecian empire in 1453 had a happy influence upon literature, as learned refugees came to Italy, where they planted the germ of a new civilization by preserving and propagating ancient erudition. Among the men who early advanced higher civilization by promoting the study of the *humanities*, as they were called, we must name Rudolph Agricola, professor at Heidelberg, from 1442 to 1480; Conrad Celter, the first crowned German poet, who flourished from 1495 to 1508 at Vienna; Reuchlin, professor at Tubingen from 1454 to 1522; Ulrich von Hutten, who died in 1523; Melancthon, and the celebrated Erasmus of Rotterdam.

From the end of the 13th, and still more from the beginning of the 14th century, the romantic poetry of the Minnesingers, gradually disappeared from the courts and castles. The nobility and knights now ceased to apply themselves to the peaceful arts, and spent their lives in the many strifes and contests by which Germany was now agitated. It was only where walled towns afforded shelter and tranquillity, that the arts and industry flourished; and at this period corporations became so general in Germany, that even the Meistersänger, or 'Master singers,' formed themselves into a corporation. It seems that Henry von Weissen, better known by the surname of Frauenlob, or 'Praise-the-ladies,' a doctor of divinity and canon at Mentz, at the end of the 13th century,

[27] The Chinese are said to have been acquainted with the art of printing about 1100 years before Christ—at least with that manner which is called xylographic printing, which consists in cutting the letters into wooden tablets, which are afterwards covered with black colour; the Japanese also claim the invention. This art has also, according to the reports of several travellers, existed in Tibet since immemorial times. It has not been pretended that the art of printing books was ever practised by the Romans. The progress of the art seems to have been as follows: 1st, Pictures from blocks of wood without text; 2dly, Pictures with text or printed characters; 3dly, Whole pages of text cut in blocks of wood for the explanation of prints which accompanied them; 4thly, Printing from moveable types. Three towns claim the honour of the invention of the typographic art of printing, or that branch of it in which use is made of moveable letters, viz. Haarlem, Strasburg, and Mentz. At Haarlem they assert, that one of their citizens, Lorenz Jansson Coster, invented, in 1430, the art of cutting written characters in wood. In Strasburg, the invention is attributed to Guttenberg, who is said to have made it in that town; whilst at Mentz they pretend that Guttenberg did not invent the typographical art at Strasburg, but in their town. The truth is, that Guttenberg conceived the first idea of his invention at Strasburg, but carried it into execution in Mentz, with the aid of Peter Schoeffer. The art of printing was brought to some degree of perfection in 1449, when Guttenberg took for his partner a rich goldsmith in Mentz, called John Fust (of which, by corruption, Faust has been made), a native of England. The most ancient work printed with cast letters by Guttenberg and Faust at Mentz, is a Latin Bible, known under the name of Guttenberg's Latin Bible, and which was finished in 1455. Faust separated afterwards from Guttenberg, and formed an establishment of his own, and as he printed particularly Latin and German Bibles, the copying of which had been a lucrative branch of industry for the monks, who, besides, could not understand the astonishing multiplication of works by print, they attributed the invention to an inspiration of the devil, which caused a great dispute between them and Faust. In 1462 he went to Paris to sell Bibles, which he had for the first time printed with the date of the year, but having heard of the attack made upon him by the monks in Germany, he suddenly left Paris, which probably gave rise to the well known story, that he had been carried off by the devil, which has been the subject of so many popular traditions and poems, and among the latter, of the beautiful and astonishing production of Goethe. Faust returned to Paris, where he died of the plague. Several printers from Mentz established printing-offices out of Germany, first in Italy and afterwards in France. M. Petit Radel informs us in his *Recherches sur les Bibliothèques*, that from the time when the art of printing was invented to the end of the 15th century, the number of books published at Venice, amounted to 2789; at Strasburg to 298; and at London to 31. And in the short period from 1500 to 1536, there appeared in Paris 3056; in Venice 2229; in Strasburg 1021; and in London 198 books or editions.

introduced the new style of poetry which succeeded that of the romantic period. Most of the Meistersingers were common tradesmen, smiths, barbers, and shoemakers; the epoch in which they flourished is, according to some, from about the middle of the 14th century, to the end of the 16th. A humorous and satiric disposition generally prevails in most of the productions of the Meistersingers. Some of the most remarkable among them are Hans Folz, Henry von Alkmar, and particularly Hans Sachs the shoemaker, and in later times, John Fischart and George Rollenhagen, &c. To this epoch belong also the earliest dawnings of dramatic literature among the Germans, for which they were especially indebted to the school of the Meistersingers of Nurnberg. Previous to this period, Mysteries only or dramatised histories from the Bible were known in Germany, and most of these were written in Latin. Hans Folz a barber, and Rosenbluet, a scutcheon-painter, introduced the carnival plays, which were received with great approbation throughout the whole of Germany, on account of their witty and lively composition; but they were far surpassed by the ingenious and gifted Hans Sachs, who, next to Lope de Vega, is perhaps the most productive of modern poets. In the 15th and 16th centuries, epic poetry assumed an allegorical and historical form, as for instance, the Teurdaunekhs by Melchior Pfuitzing, of which Maximilian I. was the hero; about the same period that species of writing called the *roman* in German, a term corresponding to the English *novel*, became fashionable. The larger romantic poems had already been changed into smaller ones or ballads.

With the Reformation a new epoch in German literature may be said to begin. Luther, who preached the noble doctrines of the Reformation in his vigorous mother-tongue, and translated the sacred writings in so masterly a manner, has been justly called the father of German prose. The gentle and learned Melancthon greatly assisted him; and the Protestant princes, particularly those of Saxony, concurred in these exertions by the foundation of establishments of education and public libraries. Whilst in the Catholic part of Germany, learned education was checked by clerical prejudices, and especially by the efforts of the Jesuits, theology and philology mutually aided and supported each other in the Protestant countries. In the 17th century the study of moral philosophy became more neglected, and scholastic polemics rose again into repute; but this change was stoutly opposed by the Theosophists and Mysticists, the latter of whom applied themselves to the cabbala, and to chemistry and astronomy, which at this time were little else than alchymy and astrology. The most distinguished among them are the celebrated Paracelsus,[28]

[28] Paracelsus was born in Switzerland in 1193. He received from his father, a physician, some instruction in his own art and in that of chemistry, in which as well as in alchymy, he was afterwards farther advanced by Trithemius and Sigismund Fugger. He led a wandering life, and endeavoured to collect knowledge not only in the universities, but also from quacks and old women; having attained considerable knowledge in chemistry, his principal efforts were directed to find the philosopher's stone, and the universal panacea. Notwithstanding this delusion, he made several valuable discoveries, and some successful cures he performed induced the magistrates of Basle to give him a professorship of medicine, when he delivered his lectures in barbarous Latin, and sometimes in German. Nothing was more ridiculous than the presumption with which he assumed a kind of universal dictatorship in the art. He burned the works of Galen and Avicenna; but affected to treat with respect the writings of Hippocrates. A dispute with the magistrates of Basle forced him to leave the town. He afterwards lived in Alsace and Germany, spending most of his time in taverns, where he remained whole nights in the worst company. At last, although he boasted of the discovery of an elixir with which he could prolong his life at his choice, he died in 1541, of a fever, at Salzburg. His principal merit is

and Jacob Bohme,[29] &c. In natural philosophy the Germans have been distinguished since the 16th century. We may here name George Agricola, and Conrad Gessner who has been called the father of natural history. Medicine also made considerable progress. About the same time, Albert Durer, the great painter, wrote a mathematical work upon perspective in the German language; and the names of Nicolaus Copernicus, Tycho de Brache, and Kepler, are known to the whole civilized world. The national jurisprudence of Germany began with the explanation of several laws of the empire in the 16th century; the civil law commenced with several ordonnances about the same period, and was followed by the criminal law of Charles VI., called the Carolina. History had been less cultivated; however, some curious chronicles, written in German in 1532, have excited general interest, and have been translated into several languages. Sleidan wrote a universal history in Latin. Literary history began with Conrad Gessner, and as early as 1564, appeared a catalogue of the booksellers' fair at Frankfort. The first German grammar was also written in the 16th century by Valentin Fekelsaucer. A new school of poetry, at the head of which stood Martin Opitz, born in 1579 in Silesia, now appeared. Lyric poetry had, till this time, been almost exclusively cultivated; but the ancients began now to be taken as standards, and the Germans imitated the classics, or what they took for classics. Opitz, though himself an imitator of the classics, was still possessed of sufficient talent to animate and to enrich German poetry. This was the case also with several others belonging to this time, as P. Gerhard, F. von Logan, and Paul Flemming.

The peace of Westphalia, in 1648, which consolidated the German constitution, had also a happy effect on the national progress in science and literature. In the different States, particularly in the Protestant ones, the rulers emulated each other in the diffusion of knowledge, and in affording the most extensive liberty of the press. The liberty of thinking was particularly protected in the Prussian States which then began to flourish. History, law, and other sciences, were now treated in a philosophical spirit, which soon shed its happy influences also upon history. Herrmann Conring and Samuel Puffendorf are great names belonging to this time, as well as Otho Guerike of Magdeburg, the inventor of the pneumatic pump, who stood at the head of German natural philosophers. One great obstacle to the progress of German literature was now felt in the want of pure models, and a good German grammar. The German language had been used for scientific lectures since the days of Thomasius, but it had received a barbarous admixture of Latin and

that he united chemistry to medicine, and showed how necessary the first was to the latter. His whole titles were, Philippus Aureolus Theophrastus Paracelsus Bombastus de Hohenheim.

[29] Jacob Bohme was born in 1575, at a village in Lusatia; he received in his youth no other instruction than reading, writing, and religious information. He followed his trade as a shoemaker, and in the quiet life which he led, his wonderful imagination and religious enthusiasm made him one of the most celebrated mystical writers of that, and perhaps of any epoch. The first collection of his whole works was published in Holland in 1625; a more complete set was published at Amsterdam in 10 vols. in 1682, by Geihtel, from whom the followers of Bohme, a sect which stands in very good reputation on account of their quiet and benevolent manner of living, have taken their name. The writings of Bohme have met with some admirers in England. A translation was published by William Law. A sect was also formed in England under his name, and Jane Leade, an enthusiastic admirer of his works, formed a society in 1697 for their explanation, under the name of the Philadelphic.

French words. Leibnitz, the greatest genius who then arose in Germany, preferred to enforce his ingenious philosophy in French; his disciple, Christian von Wolff, on the other hand, endeavoured to communicate his ideas in German, and the numerous works which began now to appear on the new philosophical system, contributed much to improve the language, and to shed light over all the sciences. The academy founded under Leibnitz's care at Berlin, produced great discoveries in mathematics and natural philosophy. The poetical works of this time, till about the middle of the 18th century, offer little satisfaction. Even some of the more gifted spirits, among whom Lohenstein may be named, lost themselves in the false tendency of the reigning bad taste. Gottsched began to purify the German language, but his bad taste in a great measure neutralized the good effect of his otherwise useful exertions, to which must be joined those of Baumgarten, the founder of æsthetics. But it was about the middle of the 18th century that a new spirit began to show itself in German literature; and since that time it may be fairly asserted that the Germans have left no field of literature or science unexplored, and in many branches have attained high eminence.

Modern German authors and works are too numerous for attempting, in the narrow bounds of this sketch, to give a list of them; we must restrict ourselves to the names merely, of the most eminent of them in the different branches in which they have been distinguished. With Haller and Hagedosa, the new era in poetry may be said to begin. They were followed by Lessing, Gelbert, Gleim, Burger, the Count Stolbergs, Voss the translator of Homer, Virgil, and Ovid, Kleist, and the great masters in German poetry, Klopstock, Wieland, Herder, Schiller, and the illustrious Göthe—in whom Germany is still happy enough to possess its greatest poet—Matthisson, the two Schlegels—of whom the one is the faithful and elegant translator of Shakspeare—John Paul, Frederic Richter—one of the greatest poets, although he never wrote verses—Tieck, Novalis, Werner, and Winkelmann who wrote with true enthusiasm on antiquities, and whose works have become the basis of classic taste in this department. Several of the above-mentioned poets are also to be numbered among the greatest prose writers in Germany. In novel writing, there are besides Wieland, Schiller, and Göthe, Tieck, John Paul, Richter, Lafontain, La Motte Fouqué, Tromlitz, Hofmann, and J. F. Jacobs. In dramatic literature there are the two great poets, Schiller and Göthe, Lessing, Werner, Mullner, Grillpazer, Offland, and Honwaldt. In philosophy the Germans have been distinguished; their commentaries and editions of the classics are justly considered as models in all Europe; and the names of Ernesti, Heyne, Wolf, Jacobs, Schiller, Eichhorn, and Paulus, are eminent in biblical criticism. Among the historical authors of Germany are Schiller, Archenholz, Eichhorn, J. Muller, Heeren, Niebuhr, Luden, Raumer, and Pölitz. In geographical researches Brsching, Gatterer, Gaspari, Hassel, and Stein, are eminent. Alexander von Humboldt holds the most distinguished rank amongst modern travellers. Euler, Kärtner, Herschel, Bode, Zach, and Olbees, are distinguished names in the annals of astronomy. In chemistry and medicine, the Germans have acquired deserved fame, by Haller, Hoffman, Stahl, Zimmerman, Von Sweiten, Stork, Scheele, Margraaf, Klaproth, and others. Mascow, Brunau, Pfister, Gatterer, and Gebaur, have illustrated the history and antiquities of Germany. In mineralogical science, the Germans are pre-eminent; and Werner of Saxony stands at

the head of modern geologists and world-contrivers. In profound and varied erudition, the Germans excel every nation on the continent. Shickard, Schindler, Bayer, Noldius, Maius, Opitius, Tympius, Ludolph, Drechsler, Pfeiffer, Loescher, Simon, Reiske, Adler, Michaelis, were eminently skilled in all the various dialects of Oriental literature, as also Meiners, Herder, Wahl, Hertmann, Kopp, Adelung, and Vater. The names of Carpzow, the elder and the younger Jablonski, the elder and younger Rosenmüller, Dathe, Doederlain, Michaelis, Semler of Halle, (not the Socinian Semler,) Niemayer, Fabricius, Eichhorn, Brune, the elder and younger Walch, the learned and pious Bengel, Glassius, and Gesenius, stand high in sacred literature. Griesbach of Leipsic has immortalized his fame amongst all religious parties, by his accurate edition of the Greek text of the New Testament, founded on a careful collation of manuscript copies. Cellarius, Burmann, Ernesti, Heyne, Reimanus, Havercamp, Reiske, and Taubman, were eminent Greek and Latin philologists, and have published excellent editions of the Greek and Roman classics. Bellermann, Helwig, Tychsen, Wolff, were eminently versed in Rabbinical antiquities, and Jewish learning. It would require a volume to go through the host of philologers, lexicographers, critics, and grammarians of Germany. Acquaintance with other languages may lay open more literary curiosities; but the possession of German, and of German Latin, is assuredly the key to most knowledge, as Germany has produced a greater number of laborious scholars, and of useful books, than any other country. In ecclesiastical history, the centurists of Magdeburg, Arnold, Wiesmann, Moller, Vogt, are celebrated; but above all the rest, Mosheim, the learned chancellor of Gottingen, stands confessed. Luther, Melancthon, Gerhard, Danhaver, Calow, Huldrich, Meisner, Carpzow, Budde, Arndt, Spener, Franck, Pfaff, Ittigius, Dange, Maius, Mosheim, and Michaelis, are the most celebrated names amongst the Lutheran theologians. The moral philosophy of Germany we do not pretend to understand; but Leibnitz, Wolff, Kant, Fichte, Jacobi, Schelling, and Hegel, are considered eminent in this branch of science.[30] In law, the Germans have many distinguished

[30] The extreme predilection of the Germans for the abstruse and thorny science of metaphysics, long contributed to widen the chasm between them and the other nations of Europe. This predilection owed its existence to the great Leibnitz, the contemporary and the rival of Newton in mathematical science, and who excelled all that had preceded him in the path of abstraction. As his system of a pre-established harmony, and prepollent motives, bore a favourable aspect to Calvinistic theology, and was completely adverse to the Arminian system of contingency and self-determination, the latter system lost ground in many parts of Germany, and several of its patrons became philosophical Calvinists. This system, which, with all the ambition natural to that science, aspired to dictate laws to every part of human knowledge, was at length, through the influence and abilities of Wolff, the ardent disciple of Leibnitz, universally adopted through all Germany. Other systems derived from it succeeded each other with the rapidity of fashions in dress. The subject, however, was soon exhausted; for as the circle of dispute concerning first principles must necessarily be very limited, the speculator, who imagined his course to be infinite, found himself almost instantaneously returned to the point whence he set out. The subject itself is truly humiliating to the pride of man, as strikingly evincing the narrow powers, and circumscribed faculties of the human mind, and the full importance of that light which benighted souls receive from the sun of Scripture. In consequence of this metaphysical passion, a degree of obscurity pervades the German style, and allusions to the most subtle speculations are common in their popular writings. The French philosophers of the 17th century, Des Cartes, Pascal, and Malebranche, were men of a serious cast of mind; and their philosophy, founded as it was upon the lofty visions of Plato, had no tendency to materialism, or to degrade human nature to a level with the beasts that perish. The philosophers of this school were idealists, but had no intention of promulgating their peculiar opinions as articles of faith, though they

authors, we name here Savigny, Hugo, and Fleck. In natural philosophy, chemistry, and natural history, Hahe, Blumenbach, Hermbstadt, and Alexander von Humboldt, are distinguished. In medicine, Hufeland, Frank, and Merkel, are celebrated. Amongst the most distinguished writers on miscellaneous subjects and critics, we may rank the two Schlegels, Tieck, Grum, Gramar, Adelung, Grimm, and Becker. The bookselling trade is carried on upon a very extensive scale in Germany In the city of Leipsic alone are yearly printed 40,435,000 sheets. Two great fairs are annually held at Leipsic, where the booksellers exchange their respective publications; and the number of these may be estimated from the fact, that during last year (1827) about 5000 new publications appeared in Germany, in which, of course, different editions and translations are included.

Fine Arts.] The art of painting was introduced very early into Germany, where, as everywhere else, it was first used in ornamenting churches and convents. We find painters mentioned as early as the 7th century. From the 12th to the 14th century, a great number of valuable

endeavoured to show that they were consistent with Scripture. Locke and Leibnitz, however, brought about a remarkable revolution in Germany and France, shortly after the commencement of the 18th century. The system of Locke banished the idealism of Malebranche from the school of French philosophy; but unfortunately, as it was manufactured by the hands of Frenchmen, while it annihilated one set of philosophical errors, it introduced others much worse, and infinitely more prejudicial to religion and morality. The doctrine of Locke, which denied all innate ideas, and made them the mere products of sensation, without allowing any distinction between the ideas of abstract and moral essences, and the phenomena of visible matter,—a doctrine which maintained the possibility of cogitation in matter, and that the soul owes the perfection of rational thinking to the body, certainly presented a strong semblance of materialism, and gave some encouragement to the sceptic to assert the materiality of the thinking substance, the doctrine of material fatalism, moral irresponsibility, &c. This system of sensations was greedily received in France. Condillac and Helvetius embraced it in its fullest extent, and carried it to every consequence prejudicial to the spiritual and moral interests of man, of which it either was, or could be made susceptible. In Diderot, the degradation was complete; in his System of Nature, materialism, such as it was maintained by Leucippus and Democritus, Epicurus and Lucretius, was renewed, and philosophy was in danger of falling back into the darkness of ancient paganism. The German metaphysics were of a different cast. The philosophy of Leibnitz had no semblance of materialism: it denied that ideas were the mere product of sensation, and maintained that the understanding had powers of perception, and laws of action, to regulate these powers, independent of sensation. From Leibnitz's doctrine, that we have the power of forming ideas independent of sensation, it was falsely concluded that we had no sensations at all, nor a sensitive faculty, nor an external world; nothing in short was left but ideas, and as these ideas, from the want of an external world, had no archetype, in order to enable us to judge of their truth, or falsehood, the conclusion was again drawn, that every thing is radically uncertain, and, therefore, that all certainty must be rejected. Thus idealism led to scepticism, equally with materialism, though by a different road. French metaphysics left nothing to man, but mere flesh and blood, or organized matter; in fact, it completely brutified him. German metaphysics, on the contrary, left him nothing but ideas, and a percipient mind. French philosophy annihilated mind and morals, while German metaphysics annihilated matter; and both ended in the same result, scepticism. At last another great pretender to metaphysical discoveries arose in Germany, namely, professor Kant, of Koningsberg, who has had the merit of driving all others out of the field for a time, and fixing the attention upon one instead of many vanities.

'Et sola in sicca secum spatiatur arena.'

His system is denominated *transcendentalism*, and is so hedged round with a host of technical terms and hard crabbed words, that it justly deserves the title. It is to put an end to all disputes, and to be a safe resting-place to the weary pilgrim in the road to truth; to steer clear of materialism, spiritualism, idealism, and scepticism, and to harmonize the jarring elements of contending systems. It will ultimately prove, notwithstanding all its magnificent pretensions, but another metaphysical cobweb in addition to the many successively spun by German philosophers, and another confirmation of the melancholy truth, that vain man would be wise, though he be born like a wild ass's colt.

paintings were executed in Germany, some of which are still preserved. One of the finest is the celebrated altar-piece in the church of Cologne, of which the master has not been quite determined; it is generally attributed to William of Cologne, or to Peter Calf. A very celebrated collection, now in the possession of the king of Bavaria, numbers several beautiful pictures of this period. Among the most distinguished artists of this epoch were Hans Trant, Kulenbach, and Michael Woklgemuth. A second important period of German art was that of the 15th and 16th centuries, when flourished the celebrated Albert Durer, who was held in high esteem even by Raphael. Lucas Kranach belongs also to this period, as well as Hans Holbein, who spent several years in England, and of whom many paintings exist in this country. Other artists of the same age are Beham, Schooreel, Lucas von Leyden, and Adam Elzheimer. Most of these artists were also engravers, of which art the different species of etching are said to be the invention of German artists. In the 17th century, and the first half of the 18th, painting had very much sunk in Germany. Mengs again introduced a better taste, which was still more established by Winkelmann's writings on antiquities. William Tischbein, Fueger, Kuegelgin, Retsch, the brothers Riepenhauren, and Cornelius, are distinguished modern and living artists. In engraving, Muller has acquired great celebrity; several others are very distinguished; and in lithography the Germans surpass all other nations.

Charlemagne brought architecture from Italy to Germany; what is called the modern Gothic or German architecture, began in the 13th century. The monuments of architecture shall be mentioned in the different places to which they belong. Before Albert Durer, sculpture flourished in Germany, and numerous fine remains of the art still exist in the different churches, as, for instance, at Cologne, the cathedral of which is adorned with the most beautiful figures to the very top of the steeple and turrets. The names of the artists are not known. Albert Durer was himself a sculptor. The other artists of the 16th and 17th centuries, are Gottfried Leggebuer, and Andreas von Schlueter. Modern and living artists are Dannecker, Schadow, Rauch, Ohnmacht, and others.

From the earliest times the Germans have evinced a great taste for music. They seem to have had musical instruments in their temples in the time of idolatry, and with the introduction of Christianity this inclination for music increased. Vocal and instrumental music was regularly taught in the schools in the middle ages. After the 12th century, music was exercised by the Minnesingers, and afterwards by the Meistersingers. In the 15th century, several good composers are noticed. Luther was possessed of superior taste in church-music, and zealously promoted all musical establishments in towns and schools. After the Thirty years' war music revived in Germany; and it made great advances in the 18th century. Several German princes, particularly Maria Theresa, and Frederic the Great of Prussia, advanced it very much. The most celebrated modern musicians are, Bach, Handel, Mozart, Hayden, Gluck, Vagler, Winter, Weber, Moschelles, and Beethoven.

Establishments for Education, &c.] Parochial schools and schools of art are very widely established in Germany, and have of late years been greatly improved, as well in their general arrangement as in the methods of communicating instruction. There is scarcely a village which has not a school; and in those provinces where the population is thinly

scattered there is at least one in every parish. The consequence of this ample provision for the instruction of youth has been, that among 1000 people of both sexes in Germany, there is scarcely one who is not able to read, and scarcely 50 who are not able to write. Schools of art have been introduced into several provinces. The town-schools are divided into elementary and higher ones; in the latter the boys are prepared for the gymnasiums. The schools for learned education are divided into gymnasiums, in which boys are taught in classes; pedagogical institutions in which all the pupils are boarded, and placed under the special care of the professors; lyceums, or academical gymnasiums, in which instruction is given, as in universities, by regular lectures; and universities, which have the right to graduate, and in which the highest branches of education are taught. There are above 20 universities in the German States, among which Göttingen, Berlin, Bonn, Heidelberg, and Munich, are the most renowned, and of which we shall give particulars in the topography. There are a great number of particular establishments, such as military academies, commercial schools, mining schools, medicinal and veterinary schools, blind and deaf, and dumb institutions, polytechnic schools, and seminaries for the education of clergymen and schoolmasters.

Germany has a number of learned societies, as the royal academies of science at Berlin and Munich; the society of German naturalists and physicians, formed on the model of the celebrated Swiss society of naturalists; and a number of societies and associations for special purposes. There are no fewer than 31 public libraries in Germany, all of which contain at least 20,000 volumes, and some of them a vastly greater number. To this immense mass of intellectual food must be added the many town and school-libraries, of which some are as extensive as those of the universities; so that it may be calculated that there are in Germany at least four millions of printed books open to the daily inspection of the public. Besides this, almost all the large private collections are accessible to the public. Great means for the general diffusion of literature are also afforded by the numerous circulating libraries and reading associations, of which every town of moderate, and many of very small size, possess at least one. The largest establishment of this kind is that of Beygang in Leipsic, which contains 70,000 volumes. The picture-galleries at Vienna, Dresden, and Munich, may be numbered among the most excellent in Europe; there are several other very good ones, as well as private collections. Among the cabinets of antiquities and medals, those at Munich and Vienna are the richest.

CHAP. VI.—CONSTITUTION AND GOVERNMENT.

HAVING considered Germany hitherto as a connected whole, we are under the necessity of saying something of its government, and of the present political bonds that knit together the component parts of the body politic. Although there is now, properly speaking, no German empire, nor German emperor, nor that intricate political constitution significantly termed by a German author, 'a chaos maintained by Providence,' yet some shadow of the old relationships still exists, under the name of the German Confederation. In our historical sketch, we have seen that the empire of Germany, for many ages, was a complete living image of the feudal system, in the centre of civilized Europe. It was a

vast assemblage of vassal population under the dominion of a host of petty but confederated feudal lords, bearing the appellation of electors, dukes, margraves, palgraves, counts, and barons, all of whom were possessed of independent territorial jurisdiction, and the absolute power of life and death over their respective vassals, but were nominally subject to an elective head, called an emperor, who frequently enjoyed dignity without power, and splendour without influence, as several of the nominally dependant princes were often possessed of much more real power and influence, derived from population and territory, than the head of the political body, who was sometimes but a mere phantom.

The chief prerogatives of the German emperor were the power of assembling the Diet, in which he presided, either personally or by deputy, and ratified its resolutions. He was the supreme judge, in whose name justice was administered in the high imperial courts; and had a power of exempting the subordinate States from the jurisdiction of the imperial tribunals, by granting them the privilege of not appealing. He was the fountain of honour; but the Germans were extremely tenacious of the rights appertaining to property, and their own material interests. The emperor could not levy taxes, make war, or alter any law of the empire, without the consent of the Diet, which was considered as the supreme power of the empire. His reverues in the capacity of emperor were but trifling, not exceeding 20,000 florins annually. But in time of war, or great emergencies, the Diet granted him extraordinary aids, called Roman months, valued at 50,000 florins each.

The Diet was composed of the emperor and the immediate States of the empire. It exercised all the powers of sovereignty, as far as concerned the interests of the whole confederate body; it levied taxes, it made laws, declared war and made peace, and concluded treaties by which the whole empire was bound. It was divided into three colleges, which deliberated separately, and decided by majority of votes; namely, that of electors, that of princes, and that of the imperial cities. Before any proposition could be passed into a law, the approbation of the three colleges was necessary: it was then called a *resolution* of the empire. It was afterwards presented to the emperor for his confirmation, which, if obtained, constituted it an act or statute of the empire, and with the previous sanctions, gave it the force of a law. There were two supreme courts of judicature, which had concurrent jurisdiction in the German empire, namely, the imperial chamber, and the aulic council. The first, which met at Wetzlaer, consisted of a judge, and two presidents, nominated by the emperor; and 27 counsellors, or assessors, appointed by the States. The authority of the aulic council originally extended to the Austrian States only; but its influence was gradually augmented, in proportion to that of the Austrian family, so that at length it claimed many of the prerogatives of the imperial chamber and the Diet. Its members were composed partly of Protestants and partly of Catholics, and its sittings were held at Vienna, as those of the Diet were held at Ratisbon.

The different States were obliged to furnish their respective quotas of men and money, to constitute and support a standing army, called 'the army of the empire;' the number generally amounted to 28,000 infantry, and 12,000 cavalry, and the expense to 1,500,000 florins annually. The spiritual princes, were supposed to be able to support an army of 75,000 men, and the secular princes one of 380,000 men, making a total of 455,000 men, as the military strength of Germany: which, had these

States been united in the during bonds of reciprocal good will, would have proved a complete overmatch for the power of France. But the Reformation, and the mutual jealousies arising from difference of religious sentiment, considerably weakened the political power of Germany; and the German Protestants were accustomed, ever since the days of Richelieu, to look up to France as their firmest bulwark against the power of Austria. Each of the 9 circles into which Germany was divided by Maximilian, in 1500, had its separate political government, under the superintendence of one or two directors, who summoned the States of the circle to meet, laid the cause of the meeting before them, and gave the necessary orders for the public welfare and general administration. The 9 electors had each a particular office in the imperial court, besides having the sole election of the emperor. The elector of Mentz was high chancellor of the empire in Germany. The elector of Treves was high chancellor of the empire, when in France; and the elector of Cologne was high chancellor of the empire, when in Italy. The king of Bohemia was cup-bearer; the elector of Bavaria, grand-sewer, or server at the feast of the coronation; the elector of Saxony, grand marshal of the empire, and count Pappenheim his deputy; the elector of Brandenburg, (now king of Prussia,) grand chamberlain; the elector Palatine, grand-steward; and the elector of Hanover, (king of Great Britain,) claimed the post of arch-treasurer. The emperor was obliged to seek the advice of these electors, before he called a Diet; and during a vacancy of the imperial throne, the electors of Bavaria and Saxony exercised the imperial jurisdiction, the former over the southern, and the latter over the northern circles. The emperors were generally chosen at Frankfort on the Maine. The title of king of the Romans was always given to those who were to succeed to the empire; but the emperors of the Austrian line generally procured the title for their eldest sons, and thus made sure of the succession to the imperial dignity in their own family.—We shall now give as perspicuous an account of the present political constitution of Germany, as our limits, and the nature of the subject will allow; without taking any notice of the Rhenish Confederation, which fell with the fortunes of its creator, Napoleon Bonaparte. The foundation of the present political arrangement was laid in the congress of Vienna, on the 9th of June 1814, and contains the following articles:

Germanic Confederation.] *Art.* 1*st.* The sovereign princes and free towns of Germany, establish among themselves a perpetual confederation, which shall bear the name of the Germanic Confederation. 2*d.* The object of the confederation is the maintenance of the external and internal security of Germany, the independence and inviolability of the confederated States. 3*d.* The members of the confederation, as such, are all equal in right, and equally obliged to support the union. 4*th.* The affairs of the confederation shall be confided to a federative diet, in which all the members shall vote by their plenipotentiaries, either individually or collectively, in the following manner, without prejudice to their rank, thus:—1. Austria, one vote; 2. Prussia, one vote; 3. Bavaria, one vote; 4. Saxony, one vote; 5. Hanover, one vote; 6. Wirtemberg, one vote; 7. Baden, one vote; 8. Electoral Hessen, one vote; 9. Grand Duchy of Hessen, one vote; 10. Denmark for Holstein, one vote; 11. Netherlands for Luxemburg, one vote; 12. Grand Ducal, and Ducal Houses of Saxony, one vote; 13. Brunswick and Nassau, one vote; 14. Mecklenburg Schwerin, and Strelitz, one vote; 15. Holstein, Oldenburg, and Schwartz-

burg, one vote; 16. Hohenzollern, Lichtenstein, Reuss, Schaumburg, Lippe, and Waldeck, one vote; 17. The free towns of Lubec, Frankfort, Bremen, and Hamburg, one vote. Total seventeen votes. *5th.* Austria shall preside at the federative diet. Every State of the confederation shall have the right of making propositions, and the presiding State is bound to bring them under consideration within a space of time to be fixed. *6th.* When fundamental laws shall be enacted, or changes made in the fundamental laws of the confederation, &c. the Diet shall form itself into a general assembly; and in that case the distribution of votes shall be as follows, calculated according to the respective extent of the individual States; Austria, four votes; Prussia, four; Bavaria, four; Saxony, four; Hanover, four; Wirtemberg, four; Baden, three; electoral Hesse, three; Grand Duchy of Hesse, three; Holstein, three; Luxemburg, three; Brunswick, two; Mecklenburg-Schwerin, two; Nassau, two; Saxe-Weimar, one; Saxe-Gotha, one; Saxe-Coburg, one; Saxe-Meiningen, one; Saxe-Hildburghausen, one; Mecklenburg-Strelitz, one; Holstein-Oldenburg, one; Anhalt-Dessau, one; Anhalt-Koethen, one; Anhalt-Bernburg, one; Hessen-Homburg, one; Schwarzburg-Sondershausen, one; Schwarzburg-Rodolstadt, one; Hohenzollern-Hechingen, one; Lichtenstein, one; Hohenzollern-Sigmaringen, one; Waldeck, one; Reuss, elder branch, one; Reuss, younger branch, one; Schaumburg Lippe, one; Lippe, one; the four free towns, one each. In all, 70 votes. *7th.* The question, whether an affair shall be discussed by the general assembly, shall be decided in the ordinary assembly, or federative diet, by the plurality of votes. The plurality of votes shall be the rule in both assemblies, with this difference, that in the ordinary assembly, an absolute plurality shall suffice, while in the other, two-thirds shall be necessary. The Diet is permanent, but may adjourn from time to time. *8th.* After drawing up organic laws, the Diet shall deliberate on the manner of fixing the order of voting in a permanent manner. *9th.* The Diet shall sit at Frankfort on the Mayne. *10th.* The first object of the Diet shall be the framing fundamental laws for the confederation, and organical institutions relative to its external, military, and internal relations. *11th.* The States of the confederation engage to defend each other upon an attack. When war is begun, no member can enter on separate negotiation. The members of the confederation, reserving to themselves the right of forming alliances, oblige themselves to contract no engagements contrary to the security of the confederation. The confederated States engage not to make war on each other on any pretext, but to submit their differences to the Diet. The fullest religious toleration is secured to the citizens of every State.

CHAP. VII.—THE GERMAN STATES OF AUSTRIA.

Having thus presented our readers with a view of Germany as a whole, without any exclusive reference to the particular States of which it is composed, we now proceed, in conformity to the proposed plan, to give a geographical description of the German sovereignties, beginning with the Austrian States, as the first in point of dignity, extent, population, and political importance. But we must premise, that the German dominions of the house of Austria, constitute only one-third of its territories, and comprise nearly the same proportion of the whole population

of what is denominated the empire of Austria. This empire may be considered as divided into four chief divisions, corresponding to the four principal nations composing its population: namely, *1st*, its German States; *2d*, its Italian States; *3d*, its Galician States; and *4th*, its Hungarian States. Under the geography of Germany, we can of course only include those Austrian provinces which belong to the German confederation.

Boundaries and Divisions.] The German dominions of the emperor of Austria, are bounded on the N. by Prussia and Saxony; on the E. by Hungary and Galicia; on the S. by Austrian Italy and the Adriatic; and on the W. by the dominions of the king of Bavaria. They may be comprised under the circle of Austria, and the Bohemian States, including Moravia and Austrian Silesia. The circle of Austria, includes the following provinces: namely, the archduchy of Austria; the duchies of Styria; the kingdom of Illyria; and the Tyrol. This country has been denominated *Austria*, or in German *Oestreich*, which signifies 'the eastern kingdom,' for more than 800 years, as appears from an ancient grant of land, made by the emperor Otho, in 996; but how long prior to this date the appellation obtained is unknown.

I. THE ARCHDUCHY OF AUSTRIA.

The archduchy of Austria lies on both sides of the Danube; it is divided by the river Ens into Upper and Lower Austria, and is bounded by Bohemia and Moravia on the N.; Hungary on the E.; Styria on the S.; and Bavaria on the W. In former times, the lower part formed the duchy of Austria, the upper belonged to Bavaria; the former had been peopled by Franks and Rhenish tribes, the latter by Bavarians, or Bojarians; and even at this day the different races may be distinguished in the population of the country.

Physical Features.] One-third of the superficies of this country, which extends to about 15,230 square miles, is made up of mountains, forests, lakes, and pasture; the other two-thirds consist of meadows, corn-fields, vineyards, and the sites of towns, and villages. The soil of Upper Austria—especially on the banks of the Danube, and of the larger streams that run into that river—is either a deep clayey loam, or a deposition of schistose and calcareous rocks which are hurried down by the torrents from the mountains. Higher up, the soil is lighter and thinner, but well adapted to corn and grass husbandry. The climate is here too precarious and boisterous for the cultivation of the vine. The surface of all Austria is a gradual slope, from the southern mountains and northern hills, towards the Danube, which flows through the heart of the country, and receives every stream that pervades it. These rivers run into their majestic receptacle, nearly at right angles from both sides, like ribs into the keel of a ship. The general surface indeed of Austria greatly resembles the inside frame of a ship,—supposing the ribs to descend gradually and gently, and to be much less straight at a distance from the keel than near to it. Accordingly, the traveller who follows the course of the Danube, can see more of the country on each hand, whether ascending or descending the river, than he can from the banks of any stream of any other region with which we are acquainted. This declivity—which is uniform and gradual for many leagues on each bank—greatly facilitates the draining of the ground, and the carriage of bulky commodities from the interior of the province to the markets and places of resort on the river.

The ground is accordingly well cultivated, and affords a rich and beautiful prospect. The numerous towns and villages on the Danube,—the variegated and majestic woods skirting the hills which rise gradually on either side,—the monasteries, castles, spires, farm-houses, and villages, peeping out here and there from the trees,—the roads crowded with carriages,—the majestic river with its swiftly gliding stream, appearing and disappearing amidst its wooded islands,—the whole scene girdled round by a fantastically varied range of distant mountains,—all these strike every stranger who visits Austria, and justly entitle it to rank among the most picturesque and charming countries in the world.

Mountains.] Austria is divided on the south from Styria, by a branch of the Noric Alps, called the Simmering heights, over which a noble road was made in 1728. A range—supposed by Busching to be the *Mons Cetius* of the Romans, and which was the eastern boundary of Noricum, dividing it from Pannonia—extends from near the source of the Save towards the Danube. This range is generally known by the name of the Kalenberg; and 9 miles to the west of Vienna, it is denominated Leopoldsberg. Parts of this chain go under particular names, as the Caumberg, Annaberg, Saurussel, Teufelstaig, Golach, and Schneeberg. The last mentioned is the most remarkable mountain in Lower Austria; and is distinctly seen from the ramparts of Vienna in a clear day. Its height is not very considerable, when compared with other mountains of the same range, being only 5,200 feet above the level of the Danube at Vienna, or 5,646 above the level of the Mediterranean; but being insulated, and almost always clothed with snow near the summit—from which circumstance it obtains the appellation of *Schneeberg,* or 'the snowy mountain'—it strikes a stranger more than any other mountain in the duchy. Upper Austria abounds in mountains, many of which aspire to considerable elevation: the highest of them is called, in German, the Grissenberg.[31]

Rivers.] Besides the Danube, already described, which rolls in great and rapid majesty through this fine country, several other rivers of considerable magnitude, as the Ens, the Traun, the Ips, the Trasin, traverse this duchy, and are studded with rich and flourishing towns and villages on their banks. Wooden bridges are generally used; but they are well contrived, strongly built, and perfectly safe. Vast quantities of timber are floated down these rivers annually, from the woody mountains, for fuel to the inhabitants of the plains. This gives employment to about one-fourth of the population, during spring and winter. The Austrian rivers not only vary greatly in colour from one another, but also from themselves, at different seasons of the year. The Danube alone, retains a yellow colour all the year round. No green can be more beautiful or lively than the waters of the Traun and Ens until they begin to be affected by the autumnal rains. Near their sources, amidst high mountains 6000 or 7000 feet above the level of the Danube, their waters are always green, and impregnated with fine particles of schistose and calcareous sand, which are conjectured to produce those glandular swellings

[31] The points, whence the traveller who loves magnificence in natural scenery, ought to take a view of the Austrian mountains, are the following: 1. The bridge over the Traun, 80 miles westward of Vienna; 2. The rampart of the town of Enns, 120 British miles, by the windings of the Danube, from Vienna; 3. The summit of a pretty high hill, rising on the eastern bank of the Gmundin lake, four miles to the south of the beautiful and romantic town of Gmundin, in Upper Austria. It is impossible to conceive any thing finer in mountain-scenery, than these points exhibit.

of the neck, here so common; and which in Switzerland as well as in Austria are called *kropf*, and in France, *goitres*.

Lakes.] The lake of Gmundin, with the fine river Traun running through it, and the two charming towns of Gmundin and Ebsdorff, at each extremity, 12 miles distant from one another, is much frequented by Austrian travellers, both by reason of the scenery of its banks, and also on account of the salt-manufactures, which are established there. From this lake and its vicinity, Austria is supplied with salt, to the value of £400,000 sterling annually. The Attersee, the Abersee, the Albensee, the Hallstattersee, the Mansee, the Irrsee, the Neuasee, the Altausee, and the Gosachsee, afford fine and varied landscapes, and greatly facilitate the carriage of wood to the salt-pans, and of all sorts of commodities to the numerous population which dwells along their shores.

Climate.] The climate varies greatly, from the mountainous borders of Styria and Bohemia, to the lower frontiers of Hungary, and the banks of the Danube. In the former, the cold in winter is intense, and storms frequent and destructive. The summer is short and precarious, and the hopes of the husbandman are often blasted by frosts and tempests in the autumnal months.[32] The winter sets in about the end of October; and the ground is, for the most part, covered with snow till the middle of March. Little or nothing can be done in agricultural labour until the end of that month. The climate, though generally cold, and occasionally subjected to very rapid transitions, is upon the whole not unhealthy, or unfavourable to human longevity. The most common diseases in the mountainous parts, are pulmonary complaints, typhus and intermitting fevers, colds, rheumatisms, and epidemical distempers brought from Italy and Turkey. Southerly and south-westerly winds are the strongest. These blow from the Styrian, Carinthian, and Tyrolese Alps, over a snowy region of several hundred miles in extent. Northerly winds are the pleasantest; but the east winds are the most piercing and constant. During the months of July, August, and September, the heat is excessive along the banks of the Danube and in the lower country: Fahrenheit's thermometer standing frequently in the shade at 95° and 98° Tempestuous winds seldom annoy the lower districts; and the climate is as favourable for animals, for grass, corn, wood, and even some species of wines, as any part of Europe in the same latitude. Lintz, the most western city of Austria on the Danube, is said to be 1000 feet above the level of the Black Sea; and Hainburg, near Presburg, the most easterly, is about 780 feet above the same level.

Vegetable and Animal Productions.] Few countries are more productive than Austria, in proportion to her extent, whether in the animal, the vegetable, or mineral department. Her breeds of horses, mules, asses, cattle, sheep, goats, and of all the common European domesticated animals, as well as of game and wild fowls, are among the best in Germany. Much attention has been paid to the improvement of the breed of horses, since the reign of Joseph II. by introducing English, Mecklenburg, and the best Turkish stallions, and by encouraging English grooms to settle in the country. Nothing very particular can be said, however, in favour of the management of live stock in this district; and abundant

[32] The average quantity of rain that falls at the towns of Gmundin and Hallstadt, in Upper Austria, which are environed by mountains, and lie on the lakes to which they give their names, is from 38 to 46 inches; while the quantity that falls at Vienna, rarely exceeds 28.

as the produce is, the inhabitants must long continue to import considerable quantities from Hungary, Bohemia, and Moravia, in order to meet the constantly increasing demands of Vienna. Salt is the only production which more than meets the demand.

Agriculture.] Austria, when compared with other provinces of northern Europe, may be fairly denominated a well managed and rich agricultural country. In this respect it surpasses Hungary and Bavaria. It is regularly enclosed, especially Upper Austria. A sort of rotation of white and green crops is observed, and the raising and harvesting of hay are perfectly well understood. Draining is not, indeed, very scientifically managed; but embankments against lakes and rivers are very skilfully constructed, and kept in admirable condition all over the country. The crops commonly cultivated are wheat, barley, oats, rye, pease, beans, potatoes, saffron, mustard, hemp, flax, and a few grasses, as vetches, tares, and clovers. In comparison with northern Germany—some parts of Mecklenburg and Holstein excepted—the crops are heavy and productive; but if compared to the best managed counties in England and Scotland, they are by no means considerable, in proportion to the fertility of the soil. Six bolls, Linlithgow measure, or three quarters of wheat, per acre, are esteemed a good crop; and four bolls of barley or oats, rather exceed the common average. The Austrian peasant is not a tenant in our sense of the word, but a feuar, who has his land very cheap, and does not calculate upon what a certain quantity of seed-corn will yield him. Hence he sows but very sparingly, perhaps six or seven pecks, or two and a half bushels, per acre; and is perfectly contented if he has six or seven fold from his seed. He plows to the depth of two or three inches, and manages his ground precisely as his forefathers did in the days of Charles V., or of Rudolph of Habsburg. The cultivation of saffron is a great branch of Austrian husbandry; it is produced in large quantities, and is superior to that of India. Wine is another great article of Austrian produce in the country east of the Ens; and in managing it, the natives of that district excel most of their neighbours. One-sixth, perhaps, of the arable land of the whole of Lower Austria, is occupied as vineyards, which pay at least one-fourth of what we call the landed rent of the province. The wine made here is white, and of an acidulous taste; and, when kept for a year or two, is both palatable and wholesome; it improves till the age of twenty years, and sells in wholesale, from the cellars at Vienna, at 8d. per bottle; the quantity consumed at Vienna and in the province is prodigious; and, together with what is exported to the northward, amounted, at an average of ten years preceding 1809, to £800,000 sterling, in annual value.

Manufactures.] Manufactures are carried on in Austria to a considerable extent. Vienna alone contains 80,000 manufacturers in woollens, silks, cottons, leather, iron, steel, glass, porcelain, paper, toys, household furniture, dress-making, &c.; and exports to the different provinces of the monarchy, the value of £1,200,000 annually, in manufactured goods. The woollen fabrics which they produce are 30 per cent. and sometimes even 60 per cent. dearer, than the same articles are in England. The same may be said of their silks and cottons. Not only the foreign commerce of the province is injured by the numerous restrictions, and heavy imposts, but also the internal improvement of the different provinces of the empire. Joseph II. imagined that manufactures would flourish, merely by prohibiting articles of foreign manu-

facture; but he lived long enough to perceive the futility of such legislative enactments, and that the wisdom of government rather lies in encouraging and directing the national energies than in impelling them by violent measures. There were a few silver, copper, and lead mines wrought some years ago; but they have now been abandoned, as not paying the expense.

Population.] Hoeck estimates the population of both Austrias at 1,820,000. Schlosser, a German journalist, at 2,100,000. De Serres—who in 1814, published a statistical account of the Austrian empire, in four volumes, 8vo. at 1,700,000: Lower Austria containing 1,050,000, and Upper Austria 650,000. Lichtenstern states the population of Lower Austria, at 1,234,000; and Upper Austria, including the Innviertel, and Hausruckviertel, at 828,000 persons: total, 2,062,000 persons. And Stein states it at 1,956,334. The mass of the population is German; but on the Moravian frontiers we find some Slavonians; and there are 1400 or 1500 Jews in the archduchy.

Topographical Divisions.] Lower Austria is divided into the government of Vienna, and the four bailiwicks of the Upper and Lower Wienerwald, and the Upper and Lower Manchartsberg.

1*st. The City of Vienna.*] Vienna, the capital of the Austrian empire, and the largest city in Germany, is delightfully situated, in the midst of a plain diversified by a number of picturesque eminences and hills, on the right bank of the Danube, where it receives a small stream called, in German, the *Wien*—whence the city has its name—which passes through the city and suburbs, near the place where stood the ancient *Vindobona*, in Pannonia Superior. To the E. and N. the country is entirely level; but to the W. and S. are seen a range of mountains thickly planted with trees and vines; and the Danube, which is here very wide, divides itself in the western part of the city into several arms, forming many islands covered with wood. The neighbourhood of this vast river, its agreeable walks, its variety of prospect, and the fertility of the soil along its banks, all concur to beautify the appearance of Vienna, and would make it an enchanting abode, if a variable climate and foggy atmosphere did not frequently overcast the cheerfulness of the scene. Its streets are unfortunately as narrow as those of any town in the south of Europe. It is divided into two great parts: viz. Vienna Proper, and the suburbs; and nothing can exhibit a greater contrast than these component parts of the same capital,—the suburbs surprising us by their extent and beauty, while the city disappoints us by its mean and irregular buildings. A stranger is perpetually impressed with the belief that the inhabitants are, as it were, imprisoned in their crowded dwellings; and this impression is fully confirmed by the impatience of the citizens, to exchange them in the spring for the free air of the suburbs. In these latter, wide streets, extensive gardens, and large edifices, unite to enable the inhabitants to pass the summer to their satisfaction.

The city within the walls is divided into four quarters, and fifteen squares, eight of which are of considerable size. The most regular of all these is called the Hof, or court, from a very ancient palace built therein by one of the Austrian margraves. The Graben, nearly in the centre of Vienna, is a very wide street, the ordinary rendezvous of loungers and strangers, with coffee-houses sufficiently light and cheerful to give an appearance of gaiety to the otherwise tranquil capital. But of all the public places at Vienna, the most interesting is the Joseph

Platz, a square surrounded by elegant buildings. Here are the imperial library, and museum of natural history; and in the centre stands a colossal statue of Joseph in a Roman dress, curbing with one hand a fiery courser, and extending his other hand as a token of protection to his people.

The places of fashionable resort are the walks and the theatres. The Prater, a large meadow on an island in the Danube, is the great resort of all ranks of people at Vienna, during the summer-season. It is a delightful place for promenading, as the vegetation is particularly beautiful and luxuriant. Vienna contains 50 churches, 21 convents, several nunneries, 70 coffee-houses, 300 taverns, 5 theatres, and 6,518 houses, of which 1,387 are within the walls. The population is variously estimated. De Serres makes it 230,000; others, 256,000; and by some, the population is raised to 270,000, and 300,000; so that we have no certain account of the number of inhabitants. The garrison generally amounts to 8,000 or 12,000 men. Most of the houses are well-built of freestone, six stories high, with flat roofs; those of a different description are covered with pieces of timber shaped like tiles. Many of them have four cellars, one under another, with an open space in the middle of each arched roof for the purposes of ventilation; and from the lowermost there is a tube to the top, to let in air from the streets. The cathedral of St. Stephen, the protomartyr, is a fair and stately Gothic fabric, but somewhat gloomy, owing to the painted glass in the windows. It was founded by Henry I. of Austria, and finished by Henry II. The building, which is of freestone, is 342 feet long, by 144 broad. The steeple is 447 feet high, and is one of the finest in Germany, and much stronger than that of Strasburg, though not so elegant. The university of Vienna was founded in 1365, and is divided into four faculties, and four nations,—Austrian, Saxon, Hungarian, and Rhenish. Several thousand students attend this university, which has a library of 90,000 volumes. There are several other excellent libraries at Vienna, as those of count Windhag, and field-marshal Pockstein, and the imperial and archducal libraries. Of these, the imperial is by far the largest, whether for printed books or manuscripts. The building, it is to be regretted, though possessing a hall 250 feet long by 100 broad, is too small for the vast collection which has been amassed in it, amounting to 300,000 printed volumes, and 12,000 manuscripts.[33]

[33] This library has been collecting ever since the days of Maximilian I. and contains the famous collection of Buda, made by Mathias Corvinus, king of Hungary; the choice library of that learned antiquarian Wolfgang Lazius; also 3000 volumes that belonged to Joannes Sambuccus; a great collection of Greek manuscripts, brought by Busbequius from Constantinople, in his two embassies; a collection belonging to the learned Cuspinian; as also the noted libraries, and astronomical and mathematical instruments of Tycho Brache, Kepler, and Gassendi; the noble collection of count Fugger, amounting to 16,000 volumes, and purchased by Ferdinand III.; a part of the renowned library of Heidelberg; and the choicest books of the library at Innspruck. Lambecius, who enjoyed the office of imperial librarian from 1662 to 1680, and who left his own collection of books to the imperial library, drew up a catalogue of them in 8 vols. folio. The additions in Kollar's new edition of this catalogue, published in 1782, are of small importance. Two-thirds of his remarks are copied verbatim from Fabricius's *Bibliotheca Græca*; and no account is given of 2,000 manuscripts, purchased within the last 100 years. No man of learning having employed his time in continuing Lambecius's catalogue, manuscripts purchased at a great expense by Austrian princes, still remain a useless and hidden treasure. In Lambecius's time, there were 90,000 printed books in the imperial library. The books remained in great confusion, till Kollar reduced them to some order in 1748. Lambecius placed books written by heretics in a peculiar and remote situation, while the most insipid productions of the Roman Catholic school stood in an open and honourable place. Philosophical, political, historical, as well as theological books of non-catholics, as

The climate of Vienna is very variable, and can by no means be called healthy: the annual bills of mortality exhibiting a list of deaths, in the proportion of one in fifteen, according to De Serres; and one in nineteen, according to Nicolai. Various hypotheses have been framed, to account for this extraordinary mortality. Nicolai attributes it to hard eating and drinking, as if all the people of Vienna were drunkards and gluttons. De Serres supposes it to arise chiefly from the resort of country invalids to the numerous hospitals and infirmaries of the capital; and affirms, in perfect contradiction to Nicolai, that the inhabitants are sober and temperate.[34]

Few spots are so intersected with water, as the vicinity of Vienna. The Danube, broken into a variety of channels, loses its usual rapidity, and seems as if disposed to linger in this beautiful scenery. But scarcely has it left the neighbourhood of the capital, and advanced into the great level of Hungary, than it rolls along, in all its former impetuosity. One of the arms of this river, flowing between the city and the suburb of Leopoldstadt, serves for the purposes of navigation, and is crossed in four different places by wooden bridges. The city of Vienna, exclusive of the suburbs, is not large; its circumference being only four miles, or an hour's walk round the ramparts. A large open space of 600 paces in breadth runs round the walls, and separates the city from the suburbs. so that the fortifications command an ample range. The suburbs, great and small, are 33 in number. In 1683, when Vienna was besieged by the Turks, the suburbs were only three or four in number; and a century ago, several of them were only villages or country-seats. Their increase has been chiefly owing to the abrogation, by Joseph II., of the feudal rights possessed by the landed proprietors of the spot, after which the district became entitled to the same privileges as the rest of the capital. Fifty years ago, Vienna was considered to be well-fortified: having a rampart, twelve strong bastions, ten ravelins, deep and wide square ditches, and outworks of proportionable strength. The old works were said to be built with the money extorted by Leopold of Austria from the people of England, as the ransom of the gallant Richard the lion-hearted. With this sum, amounting to 140,000 marks of silver, Cologne weight, Leopold not only walled and fortified Vienna, but likewise the cities of Ens, Hainburg, and Neustadt.

Vienna is situated in 48° 12′ 36″, N. Lat. and 16° 16′ 42″, E. Long. from Greenwich; and is 175 British miles, road distance, S. E. of Prague, in Bohemia.[35]

Mendelsohn, Susmilch, Iselin, and others, were imprisoned as criminals. License to read the books of heretics, under Maria Theresa, was only to be procured from the pope's nuncio. The imperial library is deplorably defective in historical works. A new catalogue has been lately ordered; and its utility has been much increased under the younger Van Sweiten. It is daily open from nine to twelve forenoon.

[34] De Luca, a German physician affirms, that of 19,229 children, admitted into the foundling-hospital, from 1772 to 1781, 8,445 have died; and Schlosser terms these foundling-hospitals, moral and natural slaughter-houses: Nicolai says, that before a foundling-hospital was established, above 1500 foundlings were annually admitted into the town hospital.

[35] Vienna owes its first aggrandizement to Henry I. in 1142, who then made it the place of his residence, and in 1158 surrounded it with a wall. In 1198, it obtained its municipal privileges. In 1241, it was captured by Frederic II. In 1477, it was unsuccessfully besieged by the Hungarians, who took it, however, in 1485, under the command of Mathias Corvinus, their king. It sustained two sieges from the Turks, in 1529, and 1683; the last of which was infinitely more terrible than the first, as it lasted upwards of ten weeks. The road to Vienna was laid open to the Turks by Tekeli, whom Leopold would not subdue by clemency, and could not reduce by force.

2*d*. *The Lower Wienerwald.*] This bailiwick contains the town of Baden, celebrated for its warm baths, which annually attract from 2000 to 3000 visitors; and the village of Schoenbrunn, with the palace of the empress Maria Theresa, and the finest botanical garden in Germany.

3*d*. *The Upper Wienerwald.*] St. Polten, the principal town of this district, contains about 4000 inhabitants, and is the seat of a bishop.

4*th*. *The Lower Manchartsberg.*] This bailiwick takes its name from the mountains which run through it. Korunenburz, with a population of 1,900 inhabitants, is the principal town. The village of Gross-Aspern, on the Danube, is celebrated by the battle of the 22d and 23d May, 1809, and Wagram, on the Russbach, by the battle of the 6th July following.

5*th*. *The Upper Manchartsberg.*] Krems, the principal town of this bailiwick, contains 3,600 inhabitants. Upwards of 100,000 pilgrims annually visit the celebrated church of Maria Taferl, which is situated here on the top of a high mountain.

The garrison only consisted of 16,000 men, commanded by count Stahremberg. Never, till the days of Napoleon, was such an army as that of the Turks seen at Vienna. It consisted of 140,000 regular troops; 18,000 Wallachians, Moldavians, and Transylvanians, led by their respective princes; 15,000 Hungarians, under Tekeli; 50,000 Tartars, under the famous Selim Gyeray Khan: the whole, including volunteers, and the usual cumberous appendages of an oriental army, amounting to 300,000 men, 31 pashas, and 5 sovereign princes, with 300 pieces of cannon; all under the command of Kara Mustapha, nephew of the great Cuprogli, but destitute of his abilities. The whole plain that encircles Vienna, comprehending a space of three leagues, was filled in all its extent with the Turkish camp, which abounded in every thing necessary for so vast a multitude. The different quarters were commanded by pashas, who displayed the magnificence of kings; but all this magnificence was eclipsed by the pomp of the vizier, who combined in his character, the opposite extremes of avarice and prodigality. His retinue consisted of 4000 officers and servants; and the park that enclosed his tents was as extensive as the city he besieged. The counterscarp was lost by the besieged, after a series of successive combats of 23 days' continuance; and on the 22d of August, the engineer, Capliers, who had made an exact computation of his means of defence, judged that he could not hold out three days longer, if the Turks should make a general assault. No army had yet appeared to help the place: and Stahremberg wrote these emphatic words to the duke of Lorrain. "No more time to lose, my lord; no more time to lose." But the avarice of the vizier proved the salvation of Vienna; for it is certain, that if he had given the orders for a general assault, the city must have fallen. Entertaining the notion that the capital of the German emperors must contain immense treasures, he was afraid of losing this imaginary wealth, if the city should be taken by storm: as in that case it would inevitably be subjected to universal and indiscriminate pillage. He therefore forbade the army to assault the place, but rather to wait patiently till it should surrender. This enraged the janizaries, and damped the ardour of the besiegers, who plainly saw that the vizier meant to be the sole gainer by the business. John Sobieski, with 25,000 men, at last arrived, on the 7th of September. On the 9th, the whole Christian army, 74,000 strong, was in motion. On the 12th, they approached the last heights of the Kalemberg range. It was yet in the power of the vizier to repair his faults, for he had nothing to do, but occupy the hill, and mask the defiles, in order to prevent the advance of the Christian army; but he neglected the opportunity. John Sobieski was appointed generalissimo of the Christian force; and in company with the duke of Lorrain, the electors of Saxony and Bavaria, and the other commanders, took the sacrament two hours before daybreak of the 13th of September,—a day that was to decide whether the cross or the crescent should prevail,—whether Vienna, under Mahommed IV. should share the fate of Constantinople, under Mahommed II.,—whether the star of the house of Hapsburg, or of Othman, should be lord of the ascendant, and whether the western empire should be re-united to that of the east. The eventful problem was settled ere night, by the utter defeat of an army three times more than that of the assailants. Vienna, though dreadfully damaged, was delivered; and Sobieski made a splendid entry, through smoking ruins, into the city, amidst the rapturous acclamations of a saved people. It was indeed a great political deliverance; for had Vienna been taken, the Christian churches, as was the case at Constantinople, would have been converted into mosques; the tide of conquest would have rolled to the Rhine, and the power of Louis XIV. been the only opposing mound to the swell of Mussulman ambition.

Upper Austria.] The inhabitants of the western part of the archduchy are almost wholly Germans; the women are distinguished for their beauty, particularly those of Linz. The religion of the majority is the Catholic; but there are about 24,000 Lutherans.

Agriculture and Manufactures.] A country so mountainous can have but little agriculture; however, there are some parts well-cultivated by the very industrious inhabitants. The cattle are fine, and the horses strong. Wood is very valuable in this country, and there are some fine forests, but they require to be managed with sagacity, as fuel is becoming scarce. Salt, and other productions of the mineral kingdom, are the principal riches of the country. Manufactures are also carried on with great industry, particularly those of iron; there are also several cotton manufactures. Lichtenstern values the exportation at twelve and a half millions of florins.

Topography.] The land above the Ens is divided into 5 circles, which are also called *viertels*, or quarters.

1*st. The Muehlviertel.*] This circle contains, according to Hassel, 176,028 inhabitants. The capital is Linz, with a population of 17,243, on the right bank of the Danube, over which is a bridge of 800 feet in length.

2*d. The Hausruckviertel.*] This is the smallest circle; it is mountainous, but has fertile valleys. Wells, with 3,738 inhabitants, is the principal town.

3*d. The Traunviertel.*] The southern part of this circle is covered with Alps, several of which have their tops constantly clothed in snow, and present glaciers and avalanches like those of Switzerland; the northern part is flat, and belongs to the valley of the Danube. Steyer, with 10,000 inhabitants, is the principal town. The richest salt mines, which form the wealth of the country, lie in the romantic district called the *Salzkammergut,* where 500,000 quintals of salt are produced every year, and where above a million could be produced if there was a market for it.

4*th. The Innviertel.*] The agriculture of this province is good. The chief town is Braunau, with 2,150 inhabitants.

5*th. The Circle of Salzach.*] This district, recently acquired from Bavaria, excluding the districts on the left banks of the Saale and Salza, and the provostship of Birchtolsgaden, is, according to Lichtenstern, 3,256 British square miles; but including these, 3,700. Its population exclusive of the districts on the Saale and Salza, retained—we presume—by the king of Bavaria, is, according to Lichtenstern, only 160,000; whilst according to Hassel, it is 210,000: according to Serres and Höeck, the population is 200,000. The difference between the three statements may be easily reconciled, as De Serres and Höeck included in the duchy the districts omitted by Lichtenstern. The mountain of Duerrenberg, near Hallein, eight British miles S. S. E. of Salzburg, produces annually 750,000 quintals of salt. The salt is of all colours, yellow, red, blue, and white; it is hewn out from subterraneous lanes, and afterwards dissolved in fresh water, which is then conveyed into pits; of the brine of which is made the finest salt. The district of Salzburg is also celebrated for its mineral productions, particularly the Zillerthal, or the vale of the river Ziller, where the substance called zillerthite is found. According to Bergman, of all the Austrian dominions, this district yields only to Hungary in the production

of the precious metals. Among the minerals found here are talc, serpentine, asbestos, and thallite, or green schorl; also beryls, and emeralds. Prodigious quantities of steel and brass are manufactured here for the different armouries. The archbishop of Salzburg was formerly primate of all Germany, the see being founded by St. Rupert, an Englishman, in A. D. 716. The archbishop possessed many large domains in Austria, Styria, and Carinthia; and his revenue was estimated by Keysler, at 800,000 rixdollars, or £140,000 sterling annually; but according to accurate and certain information, the income arising from all his lands, amounted to 4,000,000 guelders, or £350,000 sterling yearly. The archbishopric is now secularized; and was lately exchanged by the king of Bavaria, with the emperor of Austria, for the palatinate on the west side of the Rhine.

II. THE DUCHY OF STYRIA.

The old castle of Styr, situated where the Steyer falls into the Ens, gives its name to the duchy of Styria, or, as it is called in German, *Steyermark*. Though this province, with Croatia, Carniola, Carinthia, and Wendishmarch, were formerly districts of the ancient Pannonia, yet Croatia excepted, they lost that denomination, by falling to the house of Austria. Styria, is a large province, containing, according to Lichtenstern, 8,580 British square miles; being bounded by Upper and Lower Austria, on the N.; by Hungary and Croatia, on the E.; by Carinthia and Carniola, or the Illyrian government on the S.; and by Carinthia and Upper Austria, on the W. It is divided into Upper and Lower; the former, lying to the S. of the latter, is about 110 British miles in length, from W. to E.; and from 25 to 45 miles in breadth, from N. to S. Lower Styria, is about 80 British miles in length, from N. to S., and 48 from E. to W. Upper Styria is very mountainous, containing many mountains of stupendous elevation called the Styrian Alps, being a continuation of the Julian Alps; but the whole is well-cultivated; insomuch, that in many places, the hills are cultivated to their summits. The people who dwell in these Alpine regions, during winter, when large quantities of snow fall, are for several months imprisoned in their houses; and, even in summer, seldom come down from their habitations. By being accustomed to the cold of these snowy regions, they are strong, hardy and temperate, and in this respect present a great contrast to the inhabitants of Lower Styria, who are in general of weak organization and dissolute habits. The mountains support large numbers of cattle, wild fowl, game, and chamois or Alpine goats; and the brooks and lakes, many of which are situated between elevated cliffs, abound in fish.

Upper Styria is chiefly famous for its mineral productions, such as silver, lead, and copper, but particularly iron. The iron mines of Eisenarz and Vorderberg, are the most celebrated. Eisenarz[33] is situated on the banks of a small stream that falls into the Ens, in the district of Ensthal. One great advantage, for working the Styrian mines, and smelting the iron, is the superabundance of wood, with which the sides of the mountains are clothed, in the neighbourhood of these mines. The steel of Styria has been long of high celebrity, being greatly extolled by the ancient historians, and particularly by the elder Pliny; it was used by

[33] There is an inscription in the parish church here, dedicated to St. Oswald, a British saint; implying that the mines were discovered in A. D. 712; and have continued ever since to be wrought, without any sensible decay.

the Romans in manufacturing their swords, and is exported in great quantities to England. Silver was formerly dug in abundance; but the silver mines of Zeyring, have been under water since 1658. There are large salt works at Auffee. The chief rivers that water Upper Styria, are the Mur and the Ens. Its principal chains of mountains are, the Bachar, in the south; mount Grassan on the east of Judenburg; and mount Grimming on the west, which is the loftiest in all Styria. The duchy is divided into five circles. The town of Gratz, in the circle of the same name, is said to contain 34,000 inhabitants. It is a place of lively commerce, and has two great commercial fairs. The town of Marburg, in the circle of Nieuburg contains 4000 inhabitants. Judenburg on the Mur, in the circle of the same name, is the capital of Upper Styria, and contains a population of about 1500 souls; it stands in a fertile circular plain, surrounded by mountains, which are constantly covered with snow. Leoben on the Mur, in the circle of Bruck, is famous for the treaty concluded in 1797, between Bonaparte and the emperor Francis.

Lower Styria is less mountainous, more level and fertile, than Upper Styria; and excellent wine is produced in the eastern parts of this division. Hot baths and medicinal springs also abound. At Pettau on the Drave, are considerable lead mines, producing, on an average, 5000 tons yearly. The whole of Styria contains 120 towns, a vast number of villages, and 900,000 inhabitants, according to Höck; 860,000, according to Stein; 805,847, according to de Serres; and 798,000, according to Lichtenstern: so much are German statistics at variance with each other. Two-thirds of the population of Styria are Germans; the other third are Wendes of Slavonian origin, who speak a particular dialect. The great majority of the inhabitants are Catholics, but there are about 2,500 Lutherans.

III. THE KINGDOM OF ILLYRIA.

When the Romans had become masters of the Danube, the Save, and the Drave, they united all the lands which lay in the south of Noricum and Pannonia into the large province of *Illyricum,* and called the aborigines whom they found here Illyrians. This name was afterwards lost when the western Roman empire was divided; but in modern times it was used again, in the language of the Austrian administration, to designate the Hungarian provinces on the south side of the Drave. When Napoleon obtained, in the peace of Presburg, the circle of Villach, Friouli, Istria, and Croatia on the south of the Save, he joined to them Dalmatia, the Littoral, and some parts of Tyrol; and formed these into a new province of his vast empire, to which he gave the ancient name of Illyria. In 1813—14, when Austria resumed possession of Illyria, Dalmatia, the military frontiers, and the Tyrolese districts, were disjoined from it; but, on the other hand, the circle of Klagenfurt, and several districts of Venetia, were added to it, and the whole made a kingdom indissolubly joined to the Austrian monarchy, and divided into the two governments of Laibach and Trieste. It must be observed, however, that it is only those provinces of this new kingdom which had formerly belonged to the German empire: viz. Carinthia, Carniola, Austrian Friouli, and Trieste, which belong to the German confederacy.

Boundaries.] The kingdom of Illyria is bounded on the N. by Upper Austria, Styria and civil Croatia; on the E. by military Croatia; on the

S. by the Adriatic; and on the W. by the Lombardo-Venetian territory and Tyrol. Its area, according to Stein, is 11,160 British square miles.

Physical Features.] The surface of this country is intersected by high chains of mountains, and covered with isolated hills. The coasts are partly flat and sandy, and towards the W. marshy. On the W. the bay of Trieste, and on the E. that of Guarnero run deep into the country, and form the large peninsula of Istria, of which Cape Promontore is the extreme point. The three principal chains of mountains are that of the Noric Alps, of which the Gross Glockner is the highest point; that of the Carnian Alps; and that of the Julian Alps. The latter rise at the Terklou, and run on to the Adriatic. There are several chains belonging to the Julian system. All are primitive limestone; and have the peculiarity that they are excavated in an extraordinary manner. From Isonzo to the boundaries of Bosnia, there are above 1000 grottoes; and probably the whole chain is hollow, for many small rivers not only flow from these heights, but in many places seem to sink into the ground and disappear in a kind of natural tunnel. The whole of Carniola, and the eastern coast indeed present very peculiar physical features; and surpass any other region in Europe for grottoes, subterranean rivers, lakes, waterfalls, and other curious phenomena.

Rivers.] The principal rivers are the Save, the Laibach, the Gurck, the Kulp, the Isonzo, and the Quieto; of these, the most considerable is the Save, which rises in Upper Carniola, from the Terklou near the village of Ratchach, and after a course of 375 British miles, falls into the Danube, at Belgrade. This large stream divides, in its progress, southern from northern Croatia, and Slavonia from Bosnia and Servia; receiving, on the Turkish side, the Unna, the Verbas. the Bosna, the Drino, and the Colubarra; and on the left, the Veleka, the Orianna, and the Bozut. Its waters are easily distinguishable from those of the Danube at Belgrade, as being of a deep green, whereas those of the latter are yellow.

Lakes.—Czirknitz.] The principal lakes are those of Wartz, Klagenfurt, and Czirknitz. The latter is justly esteemed one of the greatest curiosities in nature. It is 8 miles long, by 4 broad, encompassed on all sides by steep mountains and forests. Annually in June, the waters disappear, chiefly by two openings which nature has provided for them in the adjoining rocks; but besides these two cavities, there are a number of holes in the bottom of the lake, through which the water entirely disappears. In September, the waters again return with such violence, that they rise to the height of a pike, and cover all the bed of the lake. When the waters are about to disappear, they rush towards the different openings, and in the space of 25 days the lake is completely drained. After the waters are gone, a field is presented in the bed of the lake, admirably adapted for cultivation, which is immediately laboured and sown; and in three months' time, abundant crops of hay and millet, are obtained from it. The grass yields good pasturage for the deer, which come from the neighbouring forests, and return before the re-appearance of the waters. When the lake is full of water, it abounds in fish, which the peasantry are allowed to take during the time that the waters are retiring. The waters have been known to retire and return three times in a year; and in some years not to fluctuate at all.

Climate.] The climate of the elevated districts is very rigorous, but, in general healthy. The circles of Laibach, Neustadt, Adelsberg, and Kailstadt enjoy a temperature sufficiently mild for the growth of vines,

chesnuts, and maize. On the coasts it is very warm, and the vegetation is luxurious. In the circle of Görz the mulberry-tree endures the winter quite well, and in Trieste the olive; but these districts want water, and are rendered unhealthy by the exhalations from the lagunes.

Industry.—Mines.] The rural inhabitants are patient agriculturists; and the fisheries of mackarel and anchovies afford a considerable source of wealth. But the most important branch of industry, is the working of minerals and the manufacture of iron, which is exported in great quantities. The Carinthian iron is equal in quality to that of Styria. The lead is also excellent, and is generally known in Europe by the appellation of the yellow lead of Villach. Lead mines have been wrought in Carinthia, from a very remote period: that near the Bleeberg, has been so for 1100 years. The annual produce of the Carinthian mines, is thus stated: iron, 165,000 quintals; copper, 936 quintals; and lead, 37,000 quintals. The quicksilver mines of Idria are of great celebrity and value, and accounted the richest in Europe, yielding annually 12,000 quintals, or 648,000 lbs. of quicksilver, and 7,000 quintals, or 378,000 lbs. of native cinnabar. These mines were accidentally discovered in 1497. The common ore is cinnabar; and the quicksilver is obtained from the numerous subterraneous cavities, that have been opened in great abundance in the mines, which have been hollowed out to the depth of 900 feet. The mercury is found in stones, in a sort of clay, and sometimes in a disengaged state, running through the crevices, and at other times spontaneously dropping on the subjacent rocks. The descent to the mines is by ladders, and stairs of stone; and the length of the galleries is computed at 1580 feet. The town of Idria is surrounded with woods; and the mountain of Vogelsberg, which contains the mines above mentioned, on the east, is covered with oaks and broom, the interior consisting of red clay, calcareous rock, and a black soft slate, covering the metallic vein in a southern direction. The mining operations in these vast mercurial caverns being pernicious to the health, are sometimes allotted as a punishment for criminals. In the time of great floods, abundance of wood is carried down from these hills, and serves as fuel for the mines. Idria lies 15 miles to the N.E. of Trieste. Carniola marble is reckoned beautiful; and is found in great plenty and variety, in different parts of the country. Alum, nitre, vitriol, bolar and fuller's-earth, together with rock-crystal, beautiful hyacinths, eagle-stones, and blood-stones, abound.

There is abundance of good pasture for cattle in Carniola and Carinthia, and considerable flocks of sheep are found here; the rams are without horns, and the fleeces are not inferior to those of Padua. The common breed of horned cattle is generally good and strong, though not of the largest size. Dairies of a similar description with those of Switzerland are frequent in Carinthia. Swine are reared in considerable numbers in the eastern quarter of Carinthia; and in the forests are found wild goats, as also red, brown, and white bears.

Inhabitants.] There are three principal tribes in the population of Illyria: viz. About 780,000 Slavonians including Wendes, Croatians, Raizes, and Ushocks; nearly 320,000 Germans, and Gottschewerians; and 11,061 Italians. The majority of the inhabitants are Catholics; but there are above 17,000 Lutherans, and 1100 Jews who enjoy ample toleration. The peasantry are a brave and hardy race. Their food is very coarse and mean: they are accustomed to sleep on a hard bench without bed or bolster; and in Upper Carniola they go barefoot in

winter through the snow. In winter, when the snow is upon the ground, the mountaineers, like the Laplanders, bind either small baskets, or long thin narrow boards, to their feet, on which, with the help of a stout staff, they descend with great velocity from the mountains; when the snow is frozen, they make use of skaits for the same purpose.

Topography.] Illyria is divided into two governments which are subdivided into 9 circles.

GOVERNMENT OF LAIBACH.] The two provinces of Carinthia and Carniola—with the exception of a part of the former which has been given to the government of Trieste—compose the government of Laibach, which contains 25 towns, 42 boroughs, and 5,947 villages and hamlets, and is divided into 5 circles. One of the loftiest mountains in the Austrian dominions, occurs in this quarter, it is called the Terklou, and is elevated 10,194 feet above the level of the sea. It is the principal summit of the southern Alpine chain, which runs in an eastern direction through Carniola. The declination of Carinthia and Carniola, as well as of Styria, is, for the most part, from west to east—a circumstance clearly evinced both by the course of the rivers, and the aspect of the mountains, which after they pass the summit of the Terklou, decline greatly in height.

1st. Circle of Laibach.] The capital of the government is Laibach, which contains a population of about 9000 souls. This town has acquired celebrity in later times, as being the scene of the famous congress, so fatal to the liberties of Italy, which removed its sittings from Troppau to this city in December 1820.

2d. Circle of Neustaedt.] The chief town of this circle is Neustaedt, with 1,690 inhabitants. Around the town of Gottschee there are located about 40,000 Gottschewarians, a German tribe, distinguished by language, customs, and manners, from the surrounding population. They conduct a considerable commerce as pedlars.

3d. Circle of Adelsberg.] In the north of this circle is the famous cave of Adelsberg, consisting of 3 grottoes, which rise one above the other; through the lowest one flows the Toigk, the uppermost forms a dome of ten fathoms height, with remarkable stalactites. At some distance is the Magdalén cave, which is 600 fathoms long, and is also full of stalactites. Idria, on the Idrizza, the seat of the mines already described, contains above 4000 inhabitants. The lake of Czirknitz is situated in this circle.

4th. Circle of Klagenfurt.] The northern part of this circle is occupied by Germans, and the southern by Wendes. Among the mountains of the south is the Loibel, over which leads the great road to Laibach, which, if we regard the length that it has been carried over a very elevated tract of country, is hardly surpassed by any other road in Europe. The chief town is Klagen, with 9,143 inhabitants. Serbach has a famous manufactory of fire-arms, and an extensive one of silver-lace.

5th. Circle of Villach.] The great body of the Lutherans are found in this district; the few Wendes are Catholics. Villach, with 4,623 inhabitants, is the chief town.

GOVERNMENT OF TRIESTE.] This government embraces the whole Austrian coast, from Grado to Novi, and forms the southern part of Illyria, to which have been added the former Austrian Friouli, and some parts of Venetian Friouli, both Istrias, the old district of Trieste, some districts of Carniola, the Hungarian Littoral, a part of the district of

Agram, on the right side of the Drave, and the two islands of the Quarnero, Cherso and Veglia. It is divided into 4 circles.

1st. *Circle of Goerz.*] The circle of Gorizin, or Görz, is inhabited by Slavonians, Italians, and Germans, which latter, however, consist only of nobility; the language is a corruption of Italian, and the religion Catholic. The principal town, which gives its name to the circle, is built on the Isonzo, and contains 9000 inhabitants. Gradiska, a fortified town upon the Isonzo, contains 805 inhabitants.

2d. *Circle of Istria.*] The inhabitants of Istria are chiefly Slavonians. Some districts are inhabited by Italians, and there are a few Germans, Armenians, and Greeks. The language is Italian, and the religion Catholic, except some Lutherans at Trieste. This is a poor tract of coast-land around the gulf of Trieste. Trieste, the chief town of the government, contains 36,000 inhabitants, and conducts a very animated commerce, being the principal commercial town of the whole Austrian empire; the harbour is large and safe. The principal trade is with the Levant. Most nations of Europe have consuls here to manage their respective interests. The town has many manufactures of different kinds. The fishing of anchovies at Rovigno produces annually 30,000 ducats.

3d. *The Circle of Fiume.*] The inhabitants of this circle are chiefly of Slavonian race; but there are some Italians, Germans, Greeks, Jews, and Gypsies. The Catholic religion is predominant Fiume on the gulf of Quarnero, is the chief town. It contains 7,526 inhabitants, and has a good harbour, which is annually visited by 1,200 or 1,500 vessels. It is to Hungary, in commercial respects, what Trieste is to the German States. The island of Veglia is situated in the gulf, and has, with the two other islands of Traunich and Tarvichio, 10,414 inhabitants, all Slavonians and Catholics. A considerable quantity of wine is produced here. The island of Cherso has 6,003 inhabitants. The mountains rising in terraces are covered with vines and olives. The inhabitants are Slavonians and Catholics. They are very industrious.

4th. *The Circle of Karlstadt.*] This circle is inhabited by Croatians; there are also a few Greeks. Karlstadt, with 3,224 inhabitants, is the chief town.

IV. THE TYROL.

The Tyrol is an extensive and very mountainous country, inferior to none in Europe for grand and romantic scenery, extending from Italy to Suabia, and from the duchy of Carinthia to the Grisons. It has its name from the castle of *Tyrol*, situated on a mountain near Merau. Under this appellation are included, not only the Tyrol, properly so called, but the bishoprics of Trent and Brixen, the seven lordships of the Voralberg, and the counties of Feldkirch, Schellenberg, Monfort, Pludenz, Hohenems, and Sonneberg: the whole—excepting the seigniory of Weiler—comprehending, according to Lichtenstern, 514 square German miles, or 10,280 British square miles. Its greatest extent from N. to S., or from the southern frontiers of the bishopric of Trent to the northern frontier of Suabia, is 140 British miles; and its greatest length from E. to W., or from the western boundary of Carinthia, to the lake of Constance, is 160 miles; but its figure is extremely irregular. In the S., its breadth is not above 70 miles; in the NW., not above 40 miles;

and in the NE., where it forms a narrow angle between Upper Bavaria and Salzburg, not more than 35, and decreasing from that to 15 miles, being merely a long valley of 60 miles in length, watered by the Inn. Another angle, reaching from the moor of Sterzing to the frontiers of Carinthia, interposes between Salzburg and Italy; extending 50 miles in an eastern and western direction, and from 30 to 20 miles in breadth, from N. to S. The population, according to Lichtenstern, excluding the lordship of Wieler in the north of the Vorarlberg, amounts to 692,000; according to Stein, the population is 755,401. The Tyrolese are chiefly of German origin; but there are about 160,000 Italians in the southern part of the country. A very small part of this population is collected in towns, as Innspruck the capital contains little more than 9000 inhabitants, and Trent 11,000.

History.] The Tyrol is one of the most ancient possessions of the House of Austria, to which it fell by inheritance in 1363. Although from the very commencement of the connexion of the Tyrolese with Austria, they had on various occasions given proofs of firm attachment and unshaken loyalty, it was not till the Succession war that the Austrian family were duly sensible of the value of such subjects. Even when Frederic, the founder of the Tyrol line of Austrian princes, abjectly yielded himself and his possessions to the emperor Sigismund, these mountaineers continued faithful to him, fortified their passes, set the imperial troops at defiance, and preserved for him a country and race of which he was utterly unworthy. The ungrateful Frederic rewarded them by the imposition of heavy taxes; but at the same time secured to them their rights and liberties, and, indeed, their constitution itself. Villanage and servitude continued unknown; and the land was tilled by a free peasantry, whose representatives formed one of the branches of the legislature. Amidst their mountains an asylum was found in the worst ages of persecution. Many of the Waldenses took refuge here. But in the latter part of the 17th century, the bishop of Brixen, and the archbishop of Salzburg, having discovered that the posterity of these good men continued in the faith of their fathers—which was neither, strictly speaking, the system of Luther nor Calvin, and therefore not within the letter of the law which had compelled them to tolerate these two main sects of the reformers—ordered them to go to mass; whereupon, in 1681, 20,000 Tyrolese left their mountains and vallies, though loving them with all that passionate attachment which is peculiar to mountaineers, and went to seek for liberty of conscience in the Protestant states of Germany and Switzerland. Happily, however, the house of Austria soon perceived it to be its interest to pursue a milder policy; freedom of conscience was allowed, and the Tyrolese peasantry were more gently taxed than any other of the emperor's subjects. The Tyrol, therefore, is almost the only corner of the dominions of Austria, where people with all the love of liberty have remained really attached to the dynasty of Hapsburg. During the Succession war, the French entered the Tyrol on one side, and the Bavarians on another, at a time when there were no troops to defend the country; but the peasants blocked up the passes, broke down the bridges, and prevented their junction, nor was a single man found who could be bribed to carry intelligence from one army to the other, impossible as it was to guard all the passes among the mountains. In 1744, this country again became the seat of war, and the French, at that time in alliance with Prussia and Bavaria, invaded it,

The people upon this rose in a mass,—a chain of fire along the mountains, was the signal of insurrection,—the women drove away the cattle into the recesses of their frozen mountains, and the men supplying the want of cannon—like the Catalonians in the late Spanish war—with the trunks of trees hooped with iron, compelled the French to retire. In 1796, they drove the French, under general Vaubois, out of their country; and, in 1797, when Bonaparte was adding conquest to conquest, they rose *en masse*, under general Laudohn, and descending like a torrent from their native mountains, drove the French out of their country; and had not Francis been terrified into the preliminaries of Leoben, by the menaces of Bonaparte, who well-knew the danger of his own situation, the French general and his army, entangled in the defiles of the Styrian mountains, might then have been destroyed, as the Tyrolese had made themselves masters of Verona, and were joined by all the neighbouring mountaineers, to the number of 50,000 men. In 1799, they drove Massena out of the Voralberg with great slaughter. In 1801 and 1805, they were also successful; particularly in 1805, when they thrice defeated Ney and the Bavarians; but by the treaty of Presburg, in January 1806, their country was delivered up to Napoleon's Bavarian ally, with a futile stipulation that their ancient privileges should be preserved to them. By the constitution of the Tyrol, the sovereign did not acquire a right to the allegiance of the people until the oath of fealty had been taken, in the name of the community, by the four Estates convened in full assembly at Innspruck. The Bavarian government neglected this ceremony, and took possession of the country by a set of French commissioners; the Estates remonstrated, and the new monarch answered them with gracious promises. At last the constitution of the Tyrol was abolished by a royal ordonnance, and the country deprived of its very name by its subdivision into the circles of the Inn, the Eisach, and the Etsch, under which denominations it was incorporated in the Bavarian monarchy, then newly remodelled into a dwarfish resemblance of its great foster-mother the French empire. When war again commenced, in 1809, between Austria and France, the Tyrolese, under the command of the gallant Hofer, took arms to emancipate themselves from the Bavarian yoke, and were for a time eminently successful, till deprived of Austrian aid, by the defeat of Wagram, and the armistice that followed, they were left to maintain the contest alone, and after a brave, but ineffectual defence, were compelled to yield to the power of Bavaria, aided by the numerous legions of France. The most horrible atrocities were now committed by the victors on the vanquished. Forty-one towns and villages in the Upper and Lower Innthal, and the Pusterthal, containing 7000 houses, were burnt, besides Nauders, Molo, and Schuderus. In the last action, near Brixen, where the wife fought by her husband, and the maiden by the side of her father or betrothed husband, 350 women were cut down by the cavalry. All the patriots who survived were delivered over to the military tribunals, and condemned to be shot. The gallant Hofer was seized in his hut, and conducted barefooted through the snow, to Botzen, and thence to Mantua, where he was shot, pursuant to a sentence of a military tribunal, on the 24th of February, 1810. He refused to let his eyes be covered when led to execution; and died as became a hero and a patriot, rejoicing that he had done his duty.[37] By

[37] Andreas Hofer was a native of Sand, in the valley of Passeyr, and was born in the year 1771. His excellent moral and religious character procured him at an early

the congress at Vienna in 1815, the Tyrolese and Voralbergers were released from their hated subjection to the Bavarian yoke, and restored to their former sovereign, the emperor of Austria.

Physical Features.] The Tyrol, and the whole south-western part of the country above the Ens, may justly be denominated *German Switzerland*,—being, in respect of physical features, a continuation of that country. Of this extensive and highly diversified region, the bishopric of Trent forms the southern division; that of Brixen, the N.E. division; the Voralberg, the N.W. division; while the proper Tyrol occupies the centre. It is bounded on the N. by Bavaria and Suabia; on the E. by Salzburg and Illyria; on the S. by Austrian Italy; and on the W. by part of the same, the country of Bormio, the Grisons, and the Lake of Constance. The Voralberg is separated on the east, by a chain of mountains denominated the Mountains of Eagles, from the Tyrol; and is called in gazetteers, the county of Bregenz; having the counties of Pludenz, Sonnenberg, Feldkirch, and Schellenberg, on the south. This country was the ancient *Rhetia;* and was by the Romans divided into Upper and Lower, the former answering to the Grisons and the Italian Tyrol, and the latter to the German Tyrol and Salzburg, the heights of the Brenner being the boundary between the two. This country is full of mountains; but the principal chain stretches from the Valteline, on the S.W., to the duchy of Salzburg, on the N.E., which, as Saussure remarks, is the general course of the Alpine chains. The Brenner, or 'burning hill,' as it is called in German, the modern name of this chain, rivals the grand Alps of Switzerland, in numerous glaciers; and, like other grand chains, presents exterior barriers, that on the north being distinguished by the name of Spitz, while that on the south is termed Vedretta. The breadth of the Tyrolian chain from Trent to Innspruck is 70 British miles directly across from S. to N. The primitive, or highest elevations, are to the north of Sterzing, whence precipitous streams descend to the river Inn on the north. The naked and rugged peaks of the mounts of Lorinzen, Fartschel, and Tschafateh, raise their towering heads towards the N.W.; and on the S.E. are those of Glander, Schloss, Pragls, and Pallanser; whose summits are entirely bare, and seem to be composed of granite. The glacier most easy of access is Stuben, 4,692 feet above the level of the sea, with beautiful pyramids of azure, which in sunshine reflect a blaze of light. The Brenner is, according to Beaumont, only 5,109 feet above the level of the sea. The Bok-kogel is another vast peak; in the opinion of Mr. Eustace, equal in height, if not superior to Mont Blanc, and presenting a more sublime and majestic appearance. Towards the west and north of Innspruck are several detached mountains covered with constant snow, amongst which those of Verner are the most remarkable. The Great Glockner, between Tyrol and Salzburg, is said to be 12,780 feet in

age the esteem of all the inhabitants of his valley, among whom he was appointed to fill an office, which nearly corresponds to that of our justice of the peace. When his country was brought under the Gallo-Bavarian yoke, he thrice repaired to Vienna to represent the situation of his countrymen to the emperor and the archdukes, and to implore their succour. Encouraged by the emperor, Hofer returned, and, with two of his companions in arms, concerted a plan for attacking the French and Bavarian troops. It was agreed that the sign for a general attack on the enemy should be given by saw-dust thrown into the river Inn. In all the places upon the banks of that river where there were persons to whom the secret had been confided, the meaning of the saw-dust was perfectly understood. They instantly hastened to ring the alarum-bells, the inhabitants rose *en masse*, and complete success crowned the undertaking. Hofer was invested with the title of commander-in-chief of the whole country.

height; and the Orteles has been computed at 12,864 feet. From Schellenberg and Feldkirch, a chain of mountains runs N.W. and S.E. as far as the Ober-Innthal, separating the Voralberg and Western Tyrol from the Grisons. It then runs a meridional course, separating the Lower Engadine from the Tyrol; and stretching eastward, separates the canton of Bormio and the sources of the Adda on the south, from the Munsterthal on the north. This chain, which is the highest of the Julian Alps, is called the Wurmser-Joch, and is noted for the daring exploit of the French, under general Dessoles, in 1799. In order to reach the Munsterthal, and make themselves masters of the head-valley of the Adige, the French had difficulties to encounter, which, it is said, would have arrested the most intrepid guides of the glaciers. Notwithstanding the ices and snows which covered the Wurmser-Joch, they climbed the mountain, and by this manœuvre turned the intrenched defiles, which the Austrians kept in the most perfect security, never dreaming of the passage of an army by a glacier hitherto deemed inaccessible. Having reached the summit, the French slid, or rather rolled down with their arms into the valley from a prodigious height, and with such of the troops as had freed themselves from those abysses, Dessoles attacked general Laudohn, in his intrenchments at Glurns and Tauffers, and compelled the most of his army to surrender with their cannon and baggage, Laudohn himself escaping with a very few of his men into the Val de Venosta.

It was reserved for this age of enterprise to disclose the secret wonders of the superior Alps, and to scale their lofty summits. The enormous ridges clothed with an unknown depth of perpetual snow, and often crowned with sharp pinnacles, or obelisks of granite, called by the Swiss, *horns*, and by the Germans, *kogel* or peaks,—the dreadful chasms presenting an abyss of some thousand feet in depth,—the glaciers, or seas of ice, sometimes extending 30 or 40 miles in length,—the sacred silence of scenes till then unvisited except by the chamois, and goat of the rocks, the clouds, and sometimes the thunderstorm, rolling at a great distance below,—the extensive prospect, reducing kingdoms as it were to a map, the pure elasticity of the air, exciting a kind of incorporeal sensation, were all novelties in the history of human adventure.

Rivers.] As might be expected in a country of mountains, rivers descend in every direction, and separate to different seas: as the Inn, the Drave, and the Lech, to the Danube; the Ill and the Bregenz, to the Rhine; the Adda, to the Po; the Adige, the Eisach, the Rienz, the Brenta, the Piave, and the Tagliamento, to the Adriatic.

The Inn.] The Inn is the principal river of the Tyrol. It rises in the canton of the Grisons, from the mountain of Maloggia, and waters the Upper and Lower Engadine, before it enters the Tyrol at St. Jacob and Finstermunz. During this part of its course, amounting to 50 British miles, as the descent is more gradual, so its course is less precipitous than other Alpine streams. But after its entrance into the Tyrol, where the descent is more precipitous, and where it is joined by numberless rapid torrents issuing from the mountains bordering on both sides of this long, steep, and narrow valley of 100 miles, it runs with greatly increased velocity, till after a comparative course of 270 British miles, during which it receives the Zill, the Aicha, the Salza, and the Rot, it enters the Danube, at Passau, with a volume of water equalling, if not surpassing that of its rival stream.

The Adige.] The Adige rises in the valley of the Malsheide, which is separated from the Ober-Innthal on the N. by a chain of heights. After running 20 miles south, it is joined by another branch, coming from the northern side of the Wurmser-Joch, through the Munsterthal. The confluent stream at Glurns obtains the name of the Etsch, which it retains till joined by the Eisach at Bolzano or Botzen, when it receives that of the Adige. After receiving the Non and the Lavis, and passing to the south by Trent and Verona, it runs E. and falls into the Adriatic, 10 miles to the north of the Po, after a comparative course of 200 miles. The Eisach is larger and more rapid than the Adige, its sister-stream.

The Drave.] East of the source of the Rienz, on the opposite side of the mountain, and above the village of Innichin, rises the river Drave. In descending the river, through the steep and winding defiles of the Tyrolian mountains, till it arrives at the town of Lienz, only 15 leagues from its source, the stream must be crossed no less than fifteen times. Hence it pursues an easterly and south-easterly course, through Carinthia, Styria, and Lower Hungary, and falls into the Danube, 16 miles below Esseck. Its comparative course may be estimated at 400 British miles; and it is frequently impassable on account of its rapidity

The Lech, Iser, and Iller.] The Lech rises in the mountains of the Voralberg, and after a course, through that elevated district, of 50 miles, it enters Bavaria, separating it from the circle of Suabia, and runs into the Danube, 10 miles to the E. of Donauwert. Its comparative course is 150 British miles.—The Iser, a river of equal length and magnitude, rises in the Tyrol, and runs along the foot of the mountains that skirt the valley of Innspruck, till it enters Bavaria. After visiting Munich, the capital of Bavaria, it runs a N.E. course of 80 miles, and enters the Danube at Dickendorff.—The Iller rises from the western side of the Mountains of Eagles; and after running through part of the Voralberg and Suabia, and passing by the city of Kempten, enters the Danube, almost opposite the city of Ulm, after a course of 100 miles.

Productions and Industry.] The Tyrolese mountains present every aspect, from the ever-blooming verdure of perpetual spring, to the dreary sterility of the frigid zone. Though covered with eternal snow, yet their sides are clothed with the finest woods, abounding in every variety of forest trees, and sheltering numerous species of game. Their valleys, though rocky in soil, have rich and extensive fields of corn, flax, and tobacco. On the eminences which crown these fertile vales, various sorts of fruit are grown, as also small woods of chesnut-trees; the vine is reared as far as Brixen, but the wine is not skilfully managed. The rugged aspect of this elevated country, contrasted with the beauty and fertility of its vales, gave rise to a saying of the emperor Maximilian, that the Tyrol was like a peasant's frock,—coarse indeed, but right warm. But the chief wealth of the Tyrol lies in its mineral productions and precious stones, such as agates, cornelians, rubies, a species of diamonds, amethysts, emeralds, chalcedonies, and granites. Mines of silver and lead, which have been long celebrated, occur near Lermos. The mines of Naserit, in the same quarter, among the Verner Mountains, 32 miles N.W. of Innspruck, are opulent in silver, lead, copper, and iron. Nor is the southern region of Tyrol deficient in mines; but the principal mines are at Schwatz, where one containing silver and copper was discovered in 1448; it is very rich, and still employs 1000 miners. This mine formerly produced a revenue of 300,000 guelders annually to the emperor; but the propor-

tion of silver to copper is now as one to forty. The salt mines at Halle, 6 miles N.E. of Innspruck, produce vast quantities of that commodity, and yield a revenue of 300,000 florins, or £35,000 sterling annually; and an annual profit of 200,000 crowns. Above 1000 hands are constantly employed in these salt-works. The Tyrolese are a very industrious people, but their industry is unaccompanied with any of those evils, which, in the present state of the manufacturing system, poison the great mass of the population of a manufacturing country. They are often seen climbing the deepest rocks with a basket of manure on their head, or letting themselves down by a rope to some little insulated spot of garden-ground which they have discovered amid the cliffs of their mountains. In autumn, they rear silk-worms, and cultivate hemp, flax, and tobacco. Many of them, like the Irish, in summer, emigrate for the season,—leaving their homes with a hurdy-gurdy, a knapsack, and a stock of oaten cakes, and returning at the end of autumn, after a tour in the surrounding countries, with the profits of their summer's toil. These annual emigrants are said to amount to 30,000. Those who go upon trading speculations have usually partners at home; and the manner in which their accounts are settled marks the honesty of the people. As soon as the adventurer has returned, his partners are summoned, his bag of money is emptied in their presence, the contents are divided according to their respective shares, and this is a final and sufficient settlement. During the winter, while the snow and the torrents block up their villages, every house exhibits a scene of delightful industry,—the women are employed at their spinning-wheels, or in knitting stockings, or embroidering cloth,—while the men and boys make boxes, cases of instruments, and toys, which find their way not only to most parts of Europe, but even to America. A particular branch of industry in this country is the breeding of Canary birds, which are reared in great quantities for sale.

Topography.] The Tyrol and Voralberg are divided into 7 circles, containing 22 towns, 36 boroughs, and 3,150 villages, and bearing the names of the principal valleys and districts.

The Circle of Unter-Innthal.] With this circle were united, in 1815, the Ziller and Brixenthal,[38] formerly belonging to Salzburg. This whole district is a large valley, through which the Inn flows, and from which some smaller valleys branch off. The Rhetian Alps here join the Noric Alps. The chief town is Innsbruck or Innspruck, the capital of Tyrol, which maintains an animated commerce. There is a very fine monument of Maximilian I. in one of the churches; and a lyceum with 15 professors. The population is estimated by Balbi at 9,000.

The Circle of Ober-Innthal.] This circle embraces the whole upper valley of the Inn, with several very narrow side-valleys. The Rhetian Alps run from S.W. to N.E. through the country, and tower here to the majestic Orteles and the Hochvogel. The air is sharp; corn is reared only in a few districts, and potatoes are almost the only food of the poor; cattle, however, are abundant, and cheese and butter are the principal productions. From no part of Tyrol is emigration so extensive as from this district, in consequence of the limited means which it possesses of supporting its population. Glurns, a small town on the

[38] The German appellation *thal* is equivalent to our term *dale*, meaning a valley watered by a river; but sometimes the name of the head-town is prefixed to the term *thal*, instead of the river watering the district.

Adige, is situated 2,820 feet above the level of the sea. Imst is a large borough, with 2,846 inhabitants, and some manufactures. It is here chiefly that the breeding of Canary birds is conducted; these little warblers are sent as far as Berlin, and afford an annual revenue of more than 35,000 florins to the country.

The Circle of Pusterthal.] This circle contains the Pusterthal, with many side-valleys. The Brenner rises here. The mountains are rich in iron, cobalt, sulphur, and crystals. The chief towns are Brunecken, upon the Rienz, with 1,200 inhabitants; and Brixen, with 3,600 inhabitants, upon the confluence of the Eisach and Rienz.

The Circle upon the Adige.] The Italian language begins to be common in this interior circle; the architecture of Botzen, and the whole appearance of the town, is more Italian than German. The mountains are of moderate elevation; and the soil in the valleys is very fertile, and produces the vine and the best fruit in Tyrol. Botzen upon the confluence of the Eisach and Talfer, contains 8,080 inhabitants, and possesses several manufactures, with four celebrated annual fairs, which are visited by a number of Italian and German merchants. Meran is an old town with 1000 inhabitants. In the middle ages it was the seat of the dukes of Meran.

The Circle on the Italian Confines at Trente.} A particular dialect is spoken by the inhabitants of this circle, who have a great resemblance to the inhabitants of the *Sette comuni.* The mountains, which are a branch of the Rhetian Alps, bear the name of the Alps of Trente. The principal river is the Adige. This is the most fertile circle of Tyrol; corn, maize, vines, and beans, are grown in abundance; the rearing of cattle is also very extensive, as well as that of silkworms—a branch of industry peculiar to this circle. Trent or Trient, on the Adige, is the principal town; it is the seat of the government, and of a bishop, and contains nearly 11,000 inhabitants.

The Circle on the Italian Confines at Roveredo.} The Alps of Trente run through this province, which consists of a few narrow valleys; but an Italian sky sheds its warm sunbeams over it, and the soil is very fertile. Silk is the principal production; there is also much wine, tobacco, and fruits, grown here. Roveredo, upon the Adige, is the principal town, and has about 10,000 inhabitants. There are many very extensive silk manufactures here. Riva, with 3,097 inhabitants, upon the Lago de Garda, in a charming situation, is a staple-place of commerce between Germany and Italy, particularly for corn; there is a good harbour on the lake, and a very magnificent church. There are ten or twelve iron-manufactures here, in which there are made daily 200 dozens of Jews' harps, which are partly sold in Italy, and partly exported from Leghorn.

The Circle of Vorarlberg.] This circle is exclusively inhabited by Germans, who have many particulars in their dress and manners. There is not corn enough raised for consumption; and the mines and manufactures, though occupying many hands, do not afford sufficiency of employment for the population, so that numbers are forced to emigrate. Bregenz, on the Lake of Constance, with 1,951 inhabitants, is the chief town. There are some iron-works in the neighbourhood.

V. THE KINGDOM OF BOHEMIA.

Bohemia is bounded by part of Saxony, the principality of Cullembach, and the Upper Palatinate, on the west; by Misnia, Lusatia, and Silesia, on the N.; on the E. by Moravia, Silesia, and the county of Glatz; and by Austria and Bavaria, on the south. Its greatest extent from N. to S., is from 48° 30′ N. latitude to 51° 5′N. latitude, or 188 British miles; and its greatest length, from E. to W., is above 200 British miles. Its figure is oval, and contains a superficies of 951 German miles, or 20,446 British square miles.

History.] Bohemia has its name from the *Boii*, an ancient German tribe which occupied the districts near the sources of the Elbe and the Moldawa, about B. C. 600. Bohemia in A. D. 350, was occupied by German tribes under the government of dukes, of whom, however, little is known. In the middle of the 6th century, a numerous army of Slavonians (Czechowes, or Tscheches, a name by which the Bohemians even now call themselves) entered this country under a chief of the name of Zecko, and subdued it.[19] The first duke known by name is Przemislas, a peasant, whom the princess Libussa married in 632, and raised to the throne. In 1061, the emperor Henry X. gave the royal title to the dukes of Bohemia. By the extinction of the male line, Bohemia came to the house of Luxemburg in 1310, when Charles VI. united Bohemia with the German empire. After the death of Albert of Austria, in 1439—whose son, Ladislaus Posthumus was also king of Hungary—Bohemia was again separated from the German empire, and after Ladislaus's death, the Bohemians elected George Podiebrad as their king. After him Wladislaw, a Polish prince, and his son Ludwig, both of whom were kings of Hungary, reigned in Bohemia. Ludwig having been killed in the battle of Mohacz in 1528, fought with the Turks, Bohemia was again united to Austria, and the subsequent alternations of its fate have been shortly mentioned in our sketch of the history of Germany.

Physical Features.] The whole appearance of this kingdom is that of an immense concavity or basin, whose bottom forms a plain considerably elevated above the level of the sea. High mountains enclose it on all sides, as the Sudetic chain, and the Giant Mountains, on the NE.; the Moravian Mountains, on the S.E. and S.; the Woody Mountains of Bohemia, on the W.; and the Erzgebirge on the north. A very considerable portion of these mountains is composed of granite, on which rest gneiss, mica, slate, clay-slate, various porphyries, and other primitive rocks, which again are surmounted by sandstone, limestone, and other rocks of the newest trap-formation. The Sudetic chain resembles an immense rampart, surmounted by a train of other ramparts, placed almost transversely. The mountains of Carleberg and Maunhaust gird Bohemia on the south, and touch the hills named the Boheimer Wald, or 'Forest of Bohemia,' on the W., which are much lower than the Sudetes, and are green almost to their summits. At the western extremity of Bohemia, the Fichtelgebirge, or 'mountain of pines,' rises to the height of 3,630 Rhenish, or 3,775 English feet, and forms a common centre to the three chains which separate Franconia from Saxony, and Bohemia from Saxony and Bavaria. Between Saxony and Bohemia, run the mountains named Erzgebirge, which join the Sudetes in Lusatia. On the side of Saxony,

[19] Other historians say, that Zecko was not a Slavonian; but that, on the contrary, the Slavonians drove his successors out of the country.

these mountains rise to the height of 3,700 feet above the level of the sea. On the side of Bohemia, they present a great many peaks composed of basalt, whose imposing aspect adds greatly to the beauty of this picturesque country.

Rivers.] The Elbe is the great conduit through which all the accumulated waters of the Bohemian concavity are carried into Saxony, near Winterberg. As the opening in the Erzgebirge through which the river forces its way is very narrow, and bears evident marks of some great convulsion, and as the whole of Bohemia is surrounded with lofty ridges of mountains, it has been conjectured by Werner, the celebrated mineralogist, that this kingdom was formerly a great inland sea, in which all the water from the surrounding mountains was collected; and that the water of this vast lake or sea, had forced its way through the rocks, at the lowest point, at Winterberg, and thus emptied itself, and formed the narrow rocky ravine, through which the Elbe now flows in passing out of Bohemia into Saxony.

Climate.] No country in Europe, can boast of a finer climate than Bohemia. Italy itself enjoys not a more pleasing spring; and summer and winter, without their respective extremes of heat and cold, only introduce here an agreeable variety of seasons. The circumjacent mountains shelter it from every wind; and no lakes or marshes are formed, to taint, by their pestiferous vapours, the salubrity of the air.

Soil and Produce.] The fertility of the soil is equal to the excellence of the climate. Every thing that can contribute to the comforts, and even to the luxuries of life, is here produced in abundance. Besides supplying its own population, Bohemia exports large quantities of grain to Silesia, Austria, and Saxony. Among the productions of the soil are buck-wheat, millet, pulse of different kinds, with fruits of an exquisite flavour, particularly cherries, which are very large and delicious. Its mountains are covered with pines, and various other species of trees; and the interior of the country is adorned with magnificent forests of oak.[40] Vineyards have not been cultivated to that extent which the excellence of the soil seems to invite. Saffron, ginger, calamus, and foxtail, are produced here in considerable quantities; but the favourite crop of this country is hops, which grow profusely, and are altogether unequalled in the excellence of their quality. The cattle, though not very numerous, are of the finest kind. The breed of horses, too, is uncommonly valuable. The breed of sheep, though originally of an inferior kind, has lately been much improved. The annual crop of hay is estimated at 8,101,799 quintals, or cwts. Great herds of swine are fed in Bohemia, as well as numerous flocks of swans, ducks, and hens. The pheasants of this country are the most beautiful in the world. Its forests and mountains abound in the most interesting species of wild fowl and game, wild boars, hares, lynxes, bears, wolves, foxes, badgers, otters, beavers, martins; and its rivers and ponds swarm with various kinds of excellent fish. But owing to the deplorable state of feudal vassalage under which the Bohemian peasantry were long held, till villanage was abolished by the emperor Joseph, the bounty of Nature was long feebly seconded by the industry of man, and it is no wonder, therefore, if, under such circumstances, this fertile country should have occasionally felt the rod of famine.

[40] The aggregate extent of its woods in 1786 was 2,219,811 acres, from which immense quantities of timber might be annually cut.

Granaries have recently been established in different districts of the country, to provide against the recurrence of such calamities.[41]

Minerals.] It has been remarked, that countries which abound in minerals, are deficient in fertility: Bohemia is, however, an exception to the truth of this remark. Its mineral wealth is equal to its fertility. Mines of gold have been found in various parts of the country, particularly at Koenstock, but the produce is too scanty to pay the expenses; small particles of gold are sometimes washed down by the torrents from the mountains, but the silver mines, which are pretty numerous, are richer and more profitable. The richest mines were those at Kuttenberg, now inundated; and at Joachimisthal near Saxony, discovered in 1516. From 1586, to 1601, the mines of Joachimisthal produced 305,790 marks of silver, each weighing 8 oz. The present produce of the silver-mines is much diminished: being about 2,400 marks, or 1,200 lbs. annually. The produce of the iron-mines, is 193,400 quintals, annually. At Elnbogen is an excellent copper-mine, and the lead mines produce 6,000 quintals yearly. One of the most singular products of Bohemia is tin, which is found at Zin Wald, or 'the tin forest,' and also on the Saxon frontier. Its tin is esteemed next to that of England. One striking circumstance attending these tin-mines is, that they are the eastern termination of European tin-mines: none being found as we advance towards the East, till we arrive at Japan and Sumatra. The net produce of all the Bohemian mines, excepting iron, is a million of Vienna florins annually, or £125,000 sterling. The annual produce of cobalt, is 11,000 quintals, and might be much increased if the demand were greater. Alum is so abundant that 3,600 quintals of it are sold annually for 36,000 florins, or £4,050 sterling. Coal exists in Bohemia, but is not plentiful; marbles of various kinds abound. Jaspers in considerable quantities, asbestos, serpentine, and other minerals of a similar kind, are found. Several gems, as sapphires, topazes, emeralds, hyacinths, and garnets, are also to be met with; the garnets are the most beautiful of the kind; the sapphires are small, and but of little value; the topazes scarcely equal those of Saxony, but the pyropus is remarkable for its fine deep blood-red colour, and great transparency. Very fine agates occur in various parts; and the Bohemian rocks contain nearly all the kinds contained and described in the Wernerian geognosy. The pearls, known by the name of Bohemian pearls, are found in the Moldawa from Kruman to below Fruenberg. The river furnishes every year from 300 to 400 pearls of the purest water, and very well-shaped, besides several hundred imperfect pearls. The house of Schwarzenberg is proprietor of the greatest part of the pearl banks. The shells which produce the pearls are of a particular species, which it would be advantageous to increase. Besides the Moldawa there is another small river called the Wattawa, which produces a few pearls; they are not fished up, as in the Moldawa, from the bed of the river, but

[41] Bohemia contains 12,172,800 acres of superficies: yet it would appear from the following official table published in 1786, that little more than one-half was then put to any use in rural economy:—

	Acres.		Acres.
Land in tillage,	3,609,360	Pastures and heath,	613,131
Fish-ponds,	67,115	Vineyards,	4,482
Fields,	220,136	Woods,	2,219,811
Meadows,	978,393		
Gardens,	83,712		7,861,655
Wet Meadows,	65,515		

taken from the shells thrown upon the banks by the overflowing of the Wattawa.

Manufactures.] Before the year 1763, the Bohemian manufactures were inconsiderable, but have improved so rapidly since, that foreign articles are almost wholly excluded the Bohemian market, by the cheapness and superior quality of those fabricated at home. In 1801, Bohemia contained 321,720 spinners of linen-thread; 85,335 manufacturers of linens, ribbands, &c.; and 41,142 looms, which produced 9,810,900 pieces of linen-cloth, whose value amounted to 20,000,000 florins, or £2,250,000 sterling; 16,295 persons were employed in manufacturing lace, and 1802 in making veils and cambrics. There were 1686 bleachfields for thread, and 1150 for linen; 50,614 were engaged in spinning wool; 24,563 in manufacturing woollen cloth, and 1128 in vending it. The value of the manufacture was 8,000,000 florins or £900,000 sterling. The cotton manufacture employed 31,902 spinners: and 8,769 weavers, who wrought at 5,880 looms. The city of Prague alone fabricated, at 350 looms, 12,000 dozen pairs of stockings, and the circle of Bunzlaw, 1650 dozen. The silk employed 360 manufacturers of silken stuffs, who had 166 looms; 630 persons were employed in manufacturing silk ribbands, who had 483 looms. In 1782, there were 70 looms for silk hose, and 111 manufacturers of that article. The value of the whole silk manufacture was 448,260 florins, or £50,423 sterling. There were 728 paper makers, who made paper to the value of 181,000 florins, or £20,420 sterling, besides a great quantity of parchments and pasteboard. In 1796, leather was sold to the amount of 915,555 florins, or £99,437 : 4*s.* sterling; and gloves to the value of 85,000 florins, or £9,562 : 10*s.* sterling. In 1801, the iron forges were 179, which employed 2,517 workmen; 12 wire mills, which employed 293 artisans; 2 manufactories of fire-arms, employing 30 workmen, and 62 forgers; 35 forgers of scythes; 186 armourers; 15 file makers; 382 nailers, and 63 cutlers. In the same year, there were 73 glassworks, which employed 1821 persons; and the value of the glass vessels annually exported, was two millions and a half of florins, or £281,250 sterling. Besides these glass works, there were 6 manufacturers of mirrors, who employed 282 hands. The sale of the two manufactories at Pernstein, amounted annually to 60,000 florins, or £6,750 sterling. The composition stones at Turnau, employ 139 workmen, whose labour produces 40,600 florins, or £2,567 : 10*s.* annually; and 3000 florins, or £337 : 10*s.*, are annually obtained by manufacturing garnets, at Dlaskowitz and Swietla. The manufacture of white starch and hair powder, produces yearly 124,000 florins, or £13,950 sterling. There are 50 gold and silversmiths, the value of whose workmanship does not exceed 140,000 florins, or £15,750 sterling. The value of the copper and brass manufactures amount to the same. The founderies, which supply the whole empire with artillery and bells, are in Bohemia and Lower Austria. The value of the tin manufacture is 56,100 florins, or £6,710 sterling annually; and the manufactories of smalt and sulphuric acid, produce 86,000 florins, or £9,675 sterling, yearly. Total value of Bohemian manufactures, as above stated, in 1801, £3,682,612 : 8*s.* sterling.

Inhabitants.] The great mass of the population of Bohemia is of Slavonian descent. The people have preserved their dialect, and many remains of their character and customs; but the German language is taught

in all the schools. Though denominated *Boehman*, or Bohemians, by the Germans, they call themselves Czeches, or Czechowes, and indeed in every other country where Wendish or Slavonic is spoken, they are known by no other name. They are not tall in stature, but active and handsome, patient and laborious. They love the Hungarians, but decidedly hate the Germans. The greatest part of the aboriginal race reside in the central parts of the country. The Germans are settled chiefly in the towns, and along the Saxon and Silesian boundaries, to the number of above 1,000,000. Till of late years, no middle rank was known in Bohemia, for here every man was either a slave or a petty despot. The degradation of the Bohemians was completed, from the hour that they became subject to the tyranny of Ferdinand II., and of the Romish religion; with their religion, their literature was extinguished, and more than 30,000 families migrated to other countries, during the Hussite war, to avoid persecution and slavery. An insurrection of the peasantry broke out in 1679, which was followed by their being stript entirely of any small remnant of liberty that was left them. But the deplorable yoke of bondage under which the Bohemians had long laboured, was removed from their necks, in 1781, by the emperor Joseph II.

Religion.] The established religion of Bohemia is the Catholic. There are, however, about 40,000 of the Reformed church, 12,000 Lutherans, 7000 Mennonites and Hussites, and above 50,000 Jews. Bohemia has one university, 12 colleges, 2,563 German schools, upwards of 92 schools of industry, 45 ladies' schools, and 2,011 Sunday-schools. These schools are mainly supported by the secularized property of the Jesuits. The Jews have a very good school at Prague, and a kind of university. The Bohemians have a remarkable talent for music, and the *Students of Prague*, as they are called, or Bohemian travelling musicians, are celebrated throughout the whole of Germany. They are generally tradespeople out of employment, who unite in bands of five or six, and wander about the country playing on different musical instruments.

Government.] Bohemia is a country indissolubly united with the Austrian empire; and hereditary in the male and female line. The revenue amounts to about 20 millions of florins.

Topography.] Bohemia contains at present 250 cities, 308 boroughs, 11,455 villages; and, according to Lichtenstern, 3,203,000 inhabitants, or 160 to every square mile; Stein, in 1826, says, 3,539,441 inhabitants. The kingdom is divided into 16 circles, besides the capital.

City of Prague.] Prague, the capital of Bohemia, and an archbishop's see, is a large, tolerably well-built, thinly inhabited, and indifferently fortified city; agreeably situated near the centre of the kingdom, in a fruitful territory on both sides of the rapid and shallow Muldawa, over which there is a handsome bridge of elegant architecture, consisting of 18 arches, built of freestone, 1770 feet in length, by 35 in breadth, having a strong tower on each end, and 5 statues on each side. It comprehends three towns: namely, the old, the new, and the little town, and is about 10 miles in circumference. It is built upon seven mountains, from whose tops many fine prospects are enjoyed. It contains above 100 churches and chapels: there are 100 palaces, 40 cloisters, 9 Jewish synagogues, and, according to M. Balbi, 95,000 inhabitants, of whom 9000 and upwards are Jews. The most remarkable of these, is that of the famous Wallenstein. The stable for his horses

is a most magnificent piece of workmanship; it contains stalls for 36 horses, with a marble pillar betwixt each horse, a rack of steel, and a marble manger for each. Of the three towns, that called the small, or lesser town, is situated on the left bank of the river, and is the most ancient, being founded by the Libussæ, a tribe of Slavi, from whom it received the Slavonic appellation of Prague. The old and new towns lie on the right bank of the river. The finest ornament of the old town is the university, of which the famous John Huss was rector: formerly, when universities were scarce, and learning was rare, this establishment was frequented by a vast number of students. The Jesuits had a magnificent college here; and it is here that the Jews reside, where they occupy upwards of 400 houses. The new town surrounds the old town, and contains a great number of fine structures, handsome gardens somewhat resembling those belonging to the metropolis of Scotland, and broad streets. The space occupied by the small town was once a forest; and a tree is yet standing here whose age is said to be upwards of a thousand years. The principal buildings in the small town, are the royal castle, the Radshin, the straw-house, the palace of Wallenstein, and the cathedral. The castle contains a hall, 100 paces long, and 40 broad, without any pillar to support the roof. The new town was founded by Charles IV. in 1348; and was for some time after its erection, called Carlstadt, in honour of its founder. The whole of the three towns are computed to contain 3192 houses. The vicinity of the city is fertile and pleasant.[42] Prague stands in N. Lat. 50° 5′ 47″ in E. Long. of Greenwich, 14° 24′. Fifty-five British miles S.E. of the nearest frontier of Saxony; 75 miles S.E. of Dresden; and 176 miles N.W. of Vienna, road distance.

1st, 2d, and 3d. Circles of Kaurzim, Beraun, and Rakonitz.} These three circles are inhabited almost exclusively by people of Slavonian descent. At Kollin upon the Elbe, in the circle of Kaurzim, was fought between the Austrians and Prussians, the celebrated battle of that name, in 1757, which compelled the latter to raise the siege of Prague.

4th. Circle of Swabz.] This circle contains 116,100 inhabitants, almost all Germans. The chief town is Swabz, with 3,783 inhabitants. The village of Sedlitz, with two saline springs, from which the famous Sedlitz salt is taken, belongs to this circle.

5th. Circle of Leitmeritz.] This whole country is covered with basaltic caves, and has a romantic appearance; but many of the valleys are particularly fertile, on which account this circle has been called the paradise of Bohemia, and the storehouse of Saxony. The baths of Toplitz, and the bitter-springs of Seidschitz, are situated in this circle. Mariaschein, a village about 2 miles from Toplitz, has a magnificent church, with an image of the Virgin, to which about 40,000 people go in pilgrimage every year.

[42] Prague has suffered severely by war. It sustained a terrible bombardment in 1757, from the Prussian army, by which 138 houses were burned; 131 totally demolished; 317 totally ruined, with 6 fine palaces; and whole streets presented nothing but heaps of rubbish. At the distance of an hour's walk from the city, stands the White Hill, rendered famous by the battle of the 8th of November, 1620, between Maximilian, duke of Bavaria, commander of the imperial army, and Frederic V. elector palatine, and king of Bohemia, which ruined the cause of the Protestants, and proved the bitter source of so many calamities to the unhappy Bohemians.

6*th. The Circle of Bunzlau.*] Here are very extensive glass manufactories. The principal manufacturing district is in the mountains, where we find a very dense population. The chief town is Iungbunslau upon the Iser, with 3,511 inhabitants.

7*th. The Circle of Bidschow.*]. The northern part is covered with the Giant Mountains.[43] The chief town is Neubidschow, with 3,158 inhabitants.

8*th. Circle of Königingratz.*] The principal town in this circle is Königingrätz, with 5,703 inhabitants. It is strongly fortified. Among the natural curiosities here presented, is, the labyrinth of rocks near Addersbach. Innumerable perpendicular rocks of freestone, from 1000 to 2000 feet in height, and of a circumference equal to half their height, thus forming great square towers, occupy a space of five miles in length, by a mile and a half in breadth. The entrance into this labyrinth resembles that of an amphitheatre; the verdure of scattered trees and shrubs forming a striking contrast to the gray masses of rock whose figures are here fantastically grouped together. A pleasant rivulet glides through the midst of this scene, and dashes into a grotto, where the echo of a thousand rocks reverberates the roar of a stupendous cascade.

9*th and* 10*th. Circles of Chrudim and Czaslau.*] These circles present nothing remarkable.

11*th. Circle of Tabor.*] Tabor, the chief town in this district, which was founded by the Hussites in 1420, contains 3,300 inhabitants.

12*th*—15*th.*] The circles of Budweis, Prachin, Klattau, and Pilsen, offer nothing remarkable.

16*th. Circle of Ellnbogen.*] This circle is mountainous, and the mines form a great branch of industry. Lace is also wrought here in great quantity. The chief town is Ellnbogen, with 1,508 inhabitants. Carlsbad, with 2,366 inhabitants, on both sides of the Tepel, is celebrated for its mineral springs and baths; one of the springs called the Brudel, has the heat of 50° Reaumur. The establishment for the visitors is very good; there are a theatre and assembly-rooms, but gambling is strictly prohibited, as in all Austrian watering-places. The country has many romantic points of scenery. Lord Findlater did much towards embellishing the place, and an obelisk has been erected to his memory. There are always more than 2000 annual visitors, and in some years 4000. The town has many manufactures, among which those of needles and pins are celebrated. Eger, on the river Eger, contains 8,111 inhabitants; it is fortified. Here the great general Wallenstein was assassinated in 1633.

VI. MARGRAVIATE OF MORAVIA AND AUSTRIAN SILESIA.

These provinces are bounded by Austria on the S.; by Hungary and Galicia on the S.E.; and by Silesia on the N.E., by this latter province and Bohemia on the N.; and by the latter on the W. They contain an area of at least 10,600 British square miles. When the great kingdom of Moravia, or Markawanja, was partitioned early in the 10th century, Poland, Hungary, and Austria, obtained parts of it. The present Moravia was long an object of dispute to the Magyars and

[43] The Giant Mountains are far famed in Germany for their wild traditions, particularly those of a spirit who is said to have his dwelling here, and of whom a number of humorous tricks are told. He is known by the nickname of *Rubezahl*, which has been translated 'Number nip.'

Czeches, till the duke of Bohemia conquered the whole country in the 11th century, since which period Moravia has always been united with Bohemia, except during the short period that Mathias Corvinus attached it to Hungary.

Physical Features.] Towards Hungary, Bohemia, and Silesia, Moravia is partly environed by mountains, partly by woods. Above one half of it is mountainous and woody. In the more level tracts of the province, are many bogs, lakes, and morasses. The climate is so cold in the mountainous parts, that the inhabitants are under the necessity of using stoves during the whole summer, but the air is wholesomer than in the champaign country. More corn, however, is produced than the inhabitants consume. Hemp and flax, fruits and vegetables, are abundant. In the tracts lying towards Austria and Austrian Silesia, there is plenty of excellent wine produced. Game and venison are plentiful. At Znaim were formerly mines of gold, which are now exhausted. The river *Morawa*, from which the province takes its name, runs south towards the Danube, and joins it at Presburg, after a comparative course of 160 British miles.

Population.] The great bulk of the population consists of Slavonians, who were once nearly wholly Protestant in their form of worship; but the emperor Ferdinand introduced Popery, after the fatal battle of Prague, in 1620. The population is now almost wholly Popish, and subject to the ecclesiastical jurisdiction of the bishop of Olmutz. The doctrines of Huss, Luther, and the Anabaptists, were early received in this country; and these sects formed the union of Herrnhut, negotiated by the celebrated count Zinzendorff. When the toleration edict of Joseph appeared in 1788, a number of the inhabitants left the Catholic church. In Silesia, the Lutherans, by means of ancient treaties, have always enjoyed the free exercise of their religion. The whole population of Moravia and Austrian Silesia, amounts, according to Lichtenstern, to 1,703,000 souls; Stein says, 1,890,706. The revenue of Moravia is stated by Zimmerman to amount to 5,793,120 florins, and that of Austrian Silesia, to 557,209, making a total of 6,350,329 florins, or £740,880 sterling.

Government.] The two Silesian circles are the remnants of the duchy of Silesia, which Austria kept on yielding the rest to Prussia in 1742. The government and administration of Moravia—to which Austrian Silesia has been united—is the same as that of Bohemia. There are 519 towns, 178 boroughs, and 3,672 villages in the country.

Topography.] Moravia is divided into six circles, namely, Olmutz, Brunn, Znaim, Iglau, Hardisch, and Prerau, which are the names of their respective chief towns. Within the second of these circles is the city of Brunn, with its citadel, built on the Spielberg, which rises to the height of 806 feet. The fortifications have been partly dismantled since 1809, but the place is still used as a state-prison. The town is well built, and remarkable for the beauty of its public edifices. One of the principal of these is the convent of St. Thomas, where there is, as the monks assure us, a miraculous Madonna, which they pretend was painted by the evangelist Luke. Brunn, which is the capital of Moravia, contains, according to Balbi, 38,000 inhabitants, and Olmutz, 13,000. The celebrated battle of Austerlitz was fought near the town of that name upon the Jitta, 12 miles from Brunn.

Austrian Silesia lies to the N.E. of Moravia, and is divided into the two circles of Teschin and Troppau. The city of Troppau is the capital of

Austrian Silesia; it contains 10,000 inhabitants, and was the scene of the memorable congress of the holy allies in 1820. The principality of Teschin, is for the most part hilly.

CHAP. VIII.—PRUSSIAN STATES OF GERMANY.

PRUSSIA is the second power of the German Confederation, having joined it with the following provinces: viz.

	German Square Miles.	Population.
Brandenburg,	740.29	1,236,220
Pomerania,	566.51	730,000
Silesia,	720.11	2,093,000
Saxony,	457.94	1,160,000
Westphalia,	376.06	1,065,000
Cleve and Berg,	158.43	884,000
Lower Rhine,	288.02	1,019,000
	3,307.36	8,187,220

We believe this account of the population is considerably below the actual amount. Stein states it at 8,518,000 in 1826, and we should think, from the rapid increase of population which has taken place in Prussia within the last ten years, that the actual population of German Prussia is not below 9,000,000. Its area is 71,000 British square miles.

I. THE PROVINCE OF BRANDENBURG.

Brandenburg is bounded on the N. by Mecklenburg, Pomerania, and Western Prussia; on the E. by Posen and Silesia; on the S. by the kingdom of Saxony; and on the W. by Anhalt-Dessau, Saxony, and Hanover.

History.] This country, from which the royal family of Prussia derive their origin, was, when first mentioned in history, occupied by the *Suevi*,* or Suabes, the most numerous and most warlike of the German tribes known to Cæsar. Other German tribes—chiefly Longobards—mingled with them, or pushed them farther onwards, till all of them shared the fate of the other Northern German tribes in the great emigration of the Northern nations which took place in the first centuries of the Christian era. The Wendes, or Slavonian tribes —among whom the *Wilzes* were the principal—built several towns, one of which was *Brannibor*, from which some derive the name *Brandenburg*. They were attacked by the Franks and Saxons, and fell with them under the power of Charlemagne in 789, but resumed their independence under his successors. The Saxon king, Henry, subdued them and conquered Brannibor; on which occasion, for the security of the Saxon frontier, *grafen*, or counts, were appointed in 921, who were the first margraves of Northern Saxony, or of the Wendish Mark. During three centuries the Wendes had maintained constant warfare with the German tribes bordering upon the Elbe, when the emperor Lothar gave the Northern Mark as a fief to Albert the Bear, count of Ascania, who put an end to

* Called also Wendi and Venedi.

the dominion of the Wendes in these districts, and was the first who assumed the title of margrave of Brandenburg. Albert conquered the rest of the Marks, and either founded Berlin, or at least raised it to the rank of a town. He was succeeded by his son Otto I. whose descendants reigned there till the year 1320, when the Ascanian line was extinguished with the margrave Henry, and the emperor Louis of Bavaria gave the Mark Brandenburg to his son Louis. Since that period this country passed successively from one house to another, till at last the emperor Sigismund, in 1415, gave the Mark Brandenburg—with which the dignity of elector had been united—to Frederic of Hohenzollern, burgrave of Nürnberg, who had lent 400,000 gold florins to the emperor, and rendered him many important services. Frederic fixed his residence at Berlin, and was the ancestor of the present royal House of Prussia. The later history of this province will be included in our historical chapter on the kingdom of Prussia.

Physical Features.] The whole of Brandenburg is almost on a level with the sea. The soil is sandy; in some districts it is mixed with lime, clay, and vegetable mould; but there are very extensive heaths and plains entirely covered with quicksand.

Rivers.] The country is very well watered. The Elbe and the Oder, two of the principal streams of Germany run through it; the first forming a part of its N.W. boundaries, and the second running through its eastern side. Both flow towards the north, and receive in their course almost all the other rivers of the country. The principal streams flowing into the Elbe are the Elde, the Stepenitz, and the Havel, which last is a navigable river, and the most useful for the inland commerce. The principal rivers belonging to the basin of the Oder, are the Bober, the Neisse, and the Wartha, a large navigable river coming from Posen.

Canals.] Among other obstructions to agriculture and commerce in the Prussian dominions, was the difficulty which prevailed of conveying materials and merchandize to different parts of the interior. In order to remove these, and to facilitate trade, the great Frederic improved the navigation of several rivers, and caused several canals to be formed, of which we have the following account from Busching. The canal of Plauen shortens the water-passage between Berlin and Magdeburg by about one-half. It begins near Parie, on the Elbe; intersects the Elbe and Stremme, having three sluices on it which check the fall of the water out of the Elbe into the Havel, which is 21 feet in height; after which it passes on by Plauen, into the Havel. This canal is four German miles and a quarter, or very nearly 20 British miles in length; it is 22 feet wide at the bottom, and 26 feet wide at the surface of the water, and in some places between 40 and 50 feet broad. Another canal joins the Spree and the Oder. This was ordered to be cut by the elector Frederic William, and was completed between the years 1662 and 1668. It issues out of the Spree into a lake near Muhlrose, in the Middle Mark, and thence runs partly along the Schlubbe, partly through it, towards the Oder, being 3 German, or 13½ British miles in length; five Rheinland perches broad, and six feet deep. Another canal joins the Havel and Oder, called the canal of Finnow. It begins at Liebenwald, on the Havel; passes thence into the river Finnow; and runs into the Oder below Lower Finnow. The Oder canal runs out of the Oder, from the village of Gustebiese to Neuenhagen, and falls into it again about four and a half British miles from its first issue.

Lakes.] There are no large lakes, but several small ones. There are several mineral springs, but that of Frienwalde is the only one which has any reputation.

Climate.] The climate is tolerably mild for the latitude; and has been improved by the draining of some large morasses. In summer the heat is often oppressive, the thermometer ranging to 25° and 26° Reaumur.

Productions.] Brandenburg produces every species of corn, but very little wheat on account of the soil. There are good vegetables, fruits of all kinds, and excellent grapes, though not in sufficient quantity for making wine. Gardening is conducted with great skill in the neighbourhood of Berlin and Potsdam. Woad is an important article. The rearing of cattle is well-conducted, and the sheep have been greatly improved by crossing with merinoes. Government has endeavoured to improve the breed of horses by the establishment of several studs. The manufactures of this province are considerable; but are confined to a few of the towns. The principal articles are wool, linen, cotton silk, iron, glass, china, and earthenware.

Inhabitants.] The population of Brandenburg is a mixture of several races. Originally they were Wendes, who, in process of time, blended with their conquerors the Saxons; but numerous colonists from different countries have also settled here. During the reign of Frederic II., 262 colonies were formed in the Mark, and about 12,000 foreign families settled here. The majority of the population is Protestant. Stein estimates the total population at 1,336,000 in 1826, of whom about 1,274,000 belong to the Lutheran, the Reformed, or the Moravian church; 18,000 are Catholics; 307 Mennonites; and 8,500 Jews. The province of Brandenburg offers one of the principal points of German civilization, and there are some very excellent educationary establishments here.

Topography.] This province contains 141 towns, 21 boroughs, and 3,241 villages. Its administration is like that of all the other Prussian provinces. It is divided into three districts, viz. Berlin, Potsdam, and Frankfort.

1*st. District of Berlin.*] The district, which receives its name from the capital, is of small extent: not exceeding 30 square miles.

City of Berlin.] Berlin, the capital of the Prussian dominions, is situated on the river Spree, which is here divided into three branches, and communicates with the Havel, Oder, and Elbe, by canals, as well as with the German Ocean and the Baltic, which greatly facilitates commercial intercourse. This city lies in the Middle Mark of Brandenburg, and is composed of five towns: viz. Berlin Proper; Cöln, Friedrichswerder, Dorotheenstadt, and Friedrichstadt. Berlin Proper is said to owe its origin to a colony of Netherlanders, who built this city in 1152, under the reign of Albert the Bear. The other towns were added after successive periods. In 1645, Berlin contained only 1,236 houses; in 1747, 5,513; in 1779, 6,437; in 1798, 6,950. In 1774, it contained 104,874 inhabitants; in 1798, exclusive of the garrison, according to Hoeck, 142,099; in 1803, 153,123, exclusive of the garrison, with a proportional increase of houses; and in 1817, 188,485, and in 1828, according to M. Balbi, 220,000 inhabitants. The whole city, including its five divisions mentioned above, is 12 miles in circumference, being four and a half miles in length and three in breadth; but within this enclosure

are many gardens, and even fields. On the south it is defended by a wall, on the north only by palisades. The entrance to Berlin is agreeable, though the country is flat and dusty, except where relieved by kitchen-gardens and moist-looking vegetables. The city itself is a long straggling, unsymmetrical, discrepant metropolis—a jumble of magnificent buildings and ruinous houses, the buildings low, alleys in the neighbourhood of palaces, the river a muddy canal. There is no look-out-of-door enjoyment in Berlin, but a great confluence of soldiers, porters, and trades-people in the streets, give them the bustling appearance of a mercantile town in England. Berlin has 15 gates. The streets in the best part of the town are straight, and well-paved; and there are several large and handsome squares, with pleasant walks; the houses in general are built of fine white freestone. The houses of the suburbs are almost all of wood: so well plastered, however, that they seem to be of stone. The royal gate of the city is defended by a half-moon and two bastions covered with brick; it fronts the royal street, which is one of the longest and best frequented in the city. It is full of very handsome houses, especially those of the ministers of state. This street is crossed by five others, noble and spacious. On the stone bridge over the Spree, is an equestrian statue of William the great elector, esteemed an excellent piece of workmanship. Beyond the bridge appears the royal palace, a grand and superb edifice, four stories high, with extremely magnificent apartments. No palace in Europe, perhaps, possessed so great a quantity of superb plate. The furniture of the great apartments is extremely rich. There is also a handsome gallery, 50 paces long, adorned with pictures and paintings done by the best masters, especially one of Raphael, representing the Head of our Saviour, valued at 50,000 crowns. The royal stables stand near the palace, and front the great street. Externally they are of Gothic appearance, but within are magnificent and elegant. The mangers are of stone; and the pillars which divide the stalls, of iron adorned with the king's cipher. Over the racks are pictures representing the finest horses which the royal stud has produced. Above the stables are large rooms containing all sorts of horse-furniture, particularly the equestrian equipage of Frederic I., the metallic part of which is of gold set with diamonds. Besides these, there are handsome lodgings for the officers. The arsenal consists of four grand buildings which form a court in the interior; each front having three large porticoes. The opera house is an elegant modern edifice. The front has a noble portico supported by Corinthian columns, and a pediment adorned with basso relievos and statues. The columns that support the roof throw the whole into a grand saloon. It has three galleries, and is capable of containing 2000 persons. Schinkel, the great architect of Berlin, has built a beautiful museum opposite the royal palace. It measures 276 by 120 feet. An iron monument, in commemoration of the victories obtained by the Prussians over the French, in the late war, is erected upon the Kreuzberg, or 'Mountain of the Cross,' at the Halle Gate. This monument, which is in the Gothic style, and entirely of cast iron, is in the shape of a pyramid, with an iron cross at the top. Including the five steps, which run all round in an octogonal form, it measures 61 feet; and weighs, inclusive of the statues, 2,297 cwt. 80 lb. A rampart and fosse separate Friedrichswerder from Dorotheenstadt, or the New Town, which is inhabited chiefly by Frenchmen. Seven great alleys or walks, divide this quarter into two parts. The middle

walk is broader than the rest, and is surrounded with balustrades, having a grass plot in the middle for persons to take the air on foot. The alleys on each side are paved, and serve for those that come abroad in carriages. These alleys—which are three miles in length—are terminated with a bar that leads towards the park. The alleys with trees, are bounded with rows of houses. In one of these are the lodgings for the guards. Above these, are the apartments occupied by the academies of painting, and of arts and sciences: behind which is the observatory,—which is well-furnished with astronomical and mathematical instruments,—the royal cabinet of medals, antiquities, and natural curiosities,—the chemical laboratory, with its furnaces and metals,—the anatomical theatre,—and the royal library, which contains 150,000 volumes, and is considered one of the most complete in Germany. Berlin has 25 churches, 26 printing-offices, 2 hospitals for invalids, a military academy, 4 colleges, 5 gymnasiums, and upwards of 250 places of education under the superintendence of nearly 1000 male and female teachers. Berlin possesses a beautiful botanical garden, a museum, established in 1820, and several deaf and dumb, and blind institutions. A most important institution is the *Charity*, which admits above 5000 sick persons, and is one of the most celebrated schools for young physicians and surgeons. There are also a missionary and a Bible society, and several almshouses. It has been calculated that 12,000 individuals are supported at Berlin on the charity of their fellow-citizens. The pleasures of Berlin—which is considered a very gay place—are nearly the same as of other large towns; the royal theatre and opera house are much frequented, and the performers and singers are reckoned among the best in Germany. The national taste for music is very much cherished, and is supported by extensive establishments. Berlin is considered as the centre of civilization for the north of Germany. This city has several times felt the awful visitations of war. In 1757, and 1760, it was taken by the Austrians, who in the last capture totally destroyed the magazines, arsenals, and founderies, and seized an immense quantity of military stores, cannon, and arms, besides exacting a contribution of 1,900,000 German crowns. On the 24th of October, 1806, Berlin was captured by the French, after the fatal battle of Jena. Berlin is situated in Lat. 52° 31′ 30″ N. and 13° 23′ E. Long. of Greenwich; 68 road-miles E. of Wittemberg; 114 road-miles N.N.E. of Leipsic; 97 road-miles E. of Magdeburg; 192 road-miles E. of Hanover, and 170 road-miles S.E. of Hamburg, and 300 N. by W. of Vienna.

2d. District of Potsdam.] This district contains 346 German square miles, and is divided into 13 circles, the united population of which exceeds 570,000. The city of Potsdam is one of the most elegant cities in the Prussian dominions. It is situated on an island 17 miles in circumference, formed by the Havel and some neighbouring lakes, and contains a population of 30,000 souls. The royal palace is an admirable structure; and in the market-place is an obelisk 75 feet in height, with marble statues of the Prussian sovereigns. Before the royal palace or castle is a grand square, ornamented with Roman columns, where the soldiers in garrison are daily exercised. On a barren hill in the vicinity, stands the palace of Sans Souci, erected by the Great Frederic, which is only one story high, yet remarkable for its grandeur and magnificence. The town-church, near this palace, is a fine structure. The garrison-church is large, having a marble pulpit, under which is the tomb of the Great Frederic, whose remains are enclosed in a wooden coffin, covered

with copper; without any inscription, ornament, or trophy, to record the memory of his great and victorious actions. This city was also captured in 1760, by the Austrians; and by the French, after the battle of Jena. There is an important foundery for cannon here, as also manufactories of silks and velvets. It is situated 20 road miles from Berlin, 48 from Wittemberg, and 77 from Magdeburg.—Besides this city, the district of Potsdam contains the town of Spandau, a strong fortress upon the Spree, with 7000 inhabitants; the town of Fehrbellin, with 1,220 inhabitants, and remarkable for the victory of the elector Frederic William over the Swedes; Brandenburg, on the Havel, with 12,004 inhabitants, and probably the oldest town of the Mark to which it has given its name; Freienwalde on the Oder, a pleasant watering-place, with 2,750 inhabitants; and the village of Mögelin, celebrated for an agricultural institution, conducted by Mr. Thär, well-known on the continent by his works on agriculture.

3d. The District of Frankfort.] This district, which is divided into 18 circles, contains 364 German square miles, with a population of 638,600. The chief town, Frankfort, upon the Oder, with upwards of 16,000 inhabitants, possesses several manufactures, and conducts an animated commerce, specially by means of three large annual fairs, much frequented by the Poles. St. Cüstrin, at the junction of the Wartha and Oder, contains 6000 inhabitants, and is one of the principal Prussian fortresses.

II. THE PROVINCE OF POMERANIA.

This province embraces the duchies of Upper and Lower Pomerania, and several other districts. It is bounded on the N.—where the island of Rügen spreads out before it—by the Baltic; on the E. by Western Prussia; on the S. by Brandenburg; and on the W. by the two grand duchies of Mecklenburg.

Physical Features.] Pomerania consi of a long narrow tract of coast-land, perfectly flat, and at some parts exhibiting small elevations here called mountains. Here and there the sandy soil is mixed with clay and mould, particularly in the district of Stralsund, to which belongs the island of Rügen, whose soil is reckoned the best in Pomerania. The Oder runs through the whole province and falls into the Frische Haff; the other principal rivers are the Peene, the Ucker, the Ihna, and the Rega. There are a great number of lakes, but none of them are of considerable size; the most remarkable is the Madue, on account of the excellent *morānes*[45] of which about 30,000 are annually caught in it. The navigation on the coast of Pomerania is dangerous, there being very few harbours.

Climate.] Pomerania has a cold climate on account of its high latitude, and its situation near the sea. The weather is changeable, rough, and damp. There are sometimes hurricanes on the coast.

Productions.] The principal productions are horses, cattle, fowls—particularly geese—fish, corn, vegetables, potatoes, fruit, wood, tobacco, salt, and peat. The soil and climate are unfavourable to agriculture, which, in spite of the industry of the inhabitants, has made very little progress, though the country furnishes more corn than it needs for

[45] The *moraene*, or *muraene*, is a kind of fish of excellent taste, found only in this and a few other lakes. It resembles a salmon in form and size, and is the *Salmo Muraena* of Linnæus.

consumption. Fruit, particularly apples, is an article of commerce. Pomerania has but few hands to devote to manufactures, which are of small importance. Commerce is animated, particularly by sea, Stettin being one of the most important sea-ports in Germany.

Population.] The inhabitants are partly Slavonians, partly Germans. Only in the N.E. there is a tribe of Slavonians, the Carjulers, who have preserved their dialect and some ancient costumes. Most of the inhabitants are Lutherans; there are also Catholics, Calvinists, Mennonites, and Jews. There is one university, and several gymnasiums and high-schools; but the establishments for education are in general much behind those of the other Prussian provinces. This province contains,

1st. The District of Stettin.] This district extends to 243 German square miles, with 342,002 inhabitants. Stettin, the chief town of the whole province, and one of the strongest fortresses of the monarchy, contained 26,000 inhabitants, according to M. Balbi, in 1828. The islands of Usedom and Wollin belong to this province; the former extending to about 150 British square miles, with a population of 2,470 souls, and the latter to 90 square miles, with 3000 inhabitants. The population of both islands is almost wholly occupied in fishing.

2d. The District of Stralsund.] This district embraces part of Pomerania, formerly belonging to Sweden, the island of Rügen, and several other small islands, extending to 75 German square miles, with a population of 137,400. It is divided into 4 circles. The chief town is Stralsund, with 15,900 inhabitants in 1826. The fortifications of this city, which were formerly celebrated, have been taken down, and the ramparts are converted into public walks. The harbour is good, but has a very narrow entrance. Greifswalde, with 7,800 inhabitants, is the seat of a university founded in 1456, but now little frequented.

Island of Rugen.] The island of Rügen is the largest island belonging to Germany; its present superficial extent is about 370 British square miles, but it has been much larger as a part of it—probably the larger part—was engulfed by the sea in the middle ages. It is divided from the main land by a strait of about a mile broad. Its form is very singular, being indented by the sea in many directions. In the N.E. a bay enters deep into the land, and forms two peninsulas. The peninsula of Jasmund is connected with Rügen proper, by a ridge of steep mountains called Prora, and by a long narrow wall of pyrites, granite, and porphyritic fragments. The N.E. side is covered by the Stubbenitz, a large forest of beeches, containing a remarkable monument of Heathen idolatry,[10] and terminates in the celebrated Stubbenkammer a chalk rock rising out of the sea in a very singular form, of which the highest point, 563 feet high, is called the Königstahl, or 'King's-seat,' and from which 600 steps, cut in the rock, lead down to the shore. With the peninsula of Jasmund is connected the peninsula of Witlow, a quite flat land, finishing in the N.W. in the Cape Arkona, the most northern point of Germany, in N. Lat. 54° 39′ 42″, on which stood the castle of Arkona, once the temple of Suantevit, the principal god of the Obotrites, and the strongest fortress of the Rugians. The island of Rugen is much more fertile than the mainland; Jasmund and Wittow are its most fertile districts. It has 28,150 inhabitants, 2 towns, 2 boroughs, and 63 villages. The principal towns are Bergen, with 2,200 inhabitants;

[10] It was here, probably, that the worship of Hertha, mentioned by Tacitus, *Germ.* c. 40. was celebrated.

Sargard, on the peninsula of Jasmund, with 200 inhabitants; and Putbus with a castle belonging to the Prince Putbus, and a recently established bathing-place, which is annually visited by above 600 persons.

3*d. The District of Köslin.*] This district contains 23 towns, 5 boroughs, and 1,196 villages, with 280,600 inhabitants, who are principally Protestants. It is divided into 9 circles. Köslin, the chief town, contains 4,900 inhabitants. Colberg, on the Persante, has a harbour on the Baltic, at the mouth of this river. This place, which has a population of 7,511 souls, is remarkable on account of several sieges it has sustained, particularly that of 1807 in the French war, when under the gallant general Gneisenau it formed an honourable exception to the other Prussian fortresses, which almost all capitulated in a manner disgraceful to their commanders; it stood the siege, although almost all the houses were burnt down, till the moment when the news of the peace of Tilsit arrived.

III. THE PROVINCE OF SILESIA.

Silesia is bounded on the N.W. by Brandenburg; on the N.E. by Posen; on the E. by Poland; on the S.E. by Cracovia and Galicia; on the S. by Moravia or Austrian Silesia; and on the S.W. by Bohemia.

History.] From the earliest times in which Silesia appears in history, we find it inhabited by Germans and Slavonians. The latter seem to have come to this country—then considered part of Poland—about the middle of the 6th century. By a division of that country among the sons of duke Bolislaus III., Silesia had, for the first time, its own rulers from the family of the Piasts. It was afterwards again divided into two duchies, from which arose the present division into Upper and Lower Silesia. The reigning family having been subdivided into several branches,—of which there were no less than 16 in the beginning of the 14th century, calling themselves sovereign dukes of Silesia,—it was an easy matter for the kings of Bohemia to subdue this country, which, in the middle of the 14th century, became a fief of that crown, and was ultimately united with it, the dukes of the line of Piast having gradually been extinguished. Since that period Silesia remained united with Bohemia, till the peace of Breslau, in 1742, when it was ceded to Prussia. Frederic II. placed Silesia out of all connexion with the German empire, and took the title of its sovereign duke; but Frederic William III. joined it, in 1818, to those of his States belonging to the German Confederacy. The administration is now similar to that of all the Prussian provinces.

Physical Features.] The Oder divides this country into two almost equal parts, very different from one another in soil and features. The German, or S.W. side is mountainous, but has an excellent soil. The N.E. side on the right bank, called the Polish side, is for the most part flat, sandy, and sterile. The country is highest to the S.E. and flattens to the N.W. The declination is northwards towards the Oder and the Baltic. The Sudetes run 200 miles on the boundaries between Silesia and Bohemia—the highest point is the Riesenkoppe, or 'Giant's Head,' 4,950 feet above the level of the sea. The Schneeberg, or 'Snow Mountain,' in the county of Glatz, is, according to the observations of the Abbe Felbiger, and Mr. Gerhard, 3,065 Parisian feet, above Habelschwerdt. This small village is 75 feet higher than Glatz, which is elevated 867 feet above the level of the sea; so that the total

elevation of Schneeberg is 4007 Parisian feet, or about 4,274 English feet. From the Schneeberg rises the Neisse, which, after watering the county of Glatz, enters Silesia, through the valley of Wartha; while the Schneeberg separates Glatz on the S.E. from Moravia, the mountains of Habelschwerdt divide it from Bohemia on the S.W. The highest part of this chain, called Grunewalde, near Rienerz, is little inferior to the Schneeberg, and both of them are covered with snow in October. To the N.W. of Habelschwerdt, rises another chain, called Heuscheune. Another chain, called the Eulengebirge, or 'the Mountains of Owls,' separates the county of Glatz from the principality of Schweidnitz in Silesia. The height of the Eulengebirge, at its northern extremity, is, according to Mr. Giersdorff, 3,326 feet above the level of the sea; and the highest part, which is in the vicinity of Hausdorff, is higher than the Great Brocken, in the Harzewald, and nearly of the same elevation as the Fichtelgebirge, mentioned in our account of Bohemia. The chain of Heuscheune, or the 'Haystack,' so called from the singular appearance of its central summit, is 2,900 feet above the level of the sea, according to Zollner: and is composed of a large mass of sandstone, formed of fine grains of quartz. Another mountain, called Diberschaar, and equal in height to the Eulengebirge, is a complete mass of basalt. In the N.W. part of Silesia are also detached mountains of considerable height, as the Zobtenberg, between Schweidnitz and Breslau. This mountain seems rather to be a detached spur from the main ridge of the Sudetic chain. It is 2,125 Rhenish feet in height: and on every side but the south is bounded by a vast plain. It is called the Silesian weathercock, because, from the appearance of its summit, the inhabitants pretend to guess what weather they shall have the next day. On its loftiest summit is a tower. This mountain consists entirely of serpentine, with some hornblende; and contains a quarry of dark green marble. In the neighbourhood of the Reisengebirge, and over all that part of Upper Silesia which lies towards Moravia and Hungary, the winter sets in earlier, is of longer duration, and much more severe than in the level country. In those very months, when at the foot of the Reisengebirge, and the Gesenk, every thing is covered with ice and snow, the trees at Breslau are in full verdure. The descent of the Reisengebirge, like that of the Erzgebirge towards Saxony, is much more gradual on the Silesian side than on the quarter towards Bohemia. The northern descent of the Schneeberg continues for the distance of eight leagues, into the interior of the country. Beyond the Oder, where it takes its course to the N.W., all mountains disappear, and those immense plains begin, by which the North of Europe is distinguished from the South.

Rivers.] The principal river, the Oder, receives all the smaller ones, with the exception of a few running on the boundaries. The principal are the Elsa, the Stober, the Oppa, the Neisse, and the Katzbach; the Vistula only touches the southern boundaries; the Iser flows to the Elbe.

Lakes.] There are very few lakes, and none of considerable size, but a great number of ponds. In Silesia alone, excluding Lusatia, there are about 6,688 of these small collections of water. There are also a number of ditches and marshes; the most remarkable of the latter are the White Meadows on the Giant Mountains, and the peat-moor of Seefeld, in the circle of Glatz, lying 2,858 feet above the level of the sea. There is

but one canal, that of Kladnitz, for the transport of coal. There are several mineral springs.

Climate.] The climate is very various: it is in general mild, even in the mountainous countries, but on approaching the southern boundaries, it becomes more rough, which is partly caused by the height of the extensive forests, and partly by the neighbourhood of the Carpathes.

Productions.] The productions of Silesia are horses, cattle, sheep, game, fowls, corn, wood, flax, wine, silver, copper, lead, iron, marble, some precious stones, coals, and peat.

Agriculture and Industry,] The agriculture of Silesia has been much improved in later years, but has not yet reached that degree of perfection which it has attained in some other German provinces. The soil is in general fruitful, and very different from that of Brandenburg, Pomerania, and Lusatia. In fact, till the acquisition of Silesia and Saxony, Magdeburg was the best province in the Prussian dominions, in proportion to its extent; and the recent acquisitions from Saxony, were the most fertile parts of the king of Saxony's dominions, except the tract between Meisen and Dresden, which rivals in fertility the North of Italy. Although the northern extremity of Silesia resembles, in comparative sterility, the soil of Brandenburg; yet, in general, Silesia is a fertile country, and extremely productive in grain, fruits and culinary vegetables. Industry is a prevailing characteristic of Silesian manners; and there is hardly a spot in all Silesia that is not turned to some good account, by the labours of the peasantry. The Silesian forests produce abundance of tar, resin, turpentine, and pitch extracted from the pine, the fir, and the larch. Iron mines were begun to be wrought in Prussian Silesia, in 1784, under the direction of count Roden, and are now the most productive in Germany. In the Silesian mines, abundance of chrysoprasus is found in various stages of transition; it appears to be a semi-opal, deriving its green tincture from nickel. Agates, jaspers, and clear crystals of quartz are also found in the Silesian mountains, especially in the environs of Landeck, in the county of Glatz. That useful mineral, coal, occurs in various parts of Silesia; it is sometimes impregnated with small particles of gold. The level districts often present extensive moors, abounding in peat moss.

Commerce.] The exportations from Silesia are considerable, and valued at about 12,000,000 Silesian crowns, or two millions sterling; the importations amount to 11,000,000 crowns, or £1,833,333 : 6 : 8*d.* The principal articles of exportation are linen, yarn, cotton, madder, wood, arsenic, galena, and iron, and other metal ware; those of importation are horses, cattle, flaxseed, salt, wine, and colonial wares. The enormous taxes, and the troublesome custom-houses, have much diminished the transit of goods; and smuggling is carried on to a great extent.

Inhabitants.] Silesia is one of the most populous provinces of the monarchy, containing 139 towns, 47 boroughs, 5,356 villages, with 2,093,000 inhabitants. The majority are Germans, the rest Slavonians of the Polish race, and most of the latter are blended with the Germans. In Upper Silesia, and on the boundaries of Posen and Poland, the Polish language and Polish manners are found. In the former circles of Lusatia, Wendes are established; the Jews labour here under hard restrictions, there are, however, about 17,000 in Silesia. The nobility are numerous, and divided into high and low; part of them are very

rich, and they enjoy peculiar privileges; bondage has been entirely abolished.

Religion.] Religion has had singular fates in Silesia. Luther's doctrines found numerous partisans, who, after severe oppressions, obtained, in 1609, from the emperor Rudolph, a dearly bought charter for the exercise of their religion. New securities were taken in the peace of Münster; but in spite of this they afterwards lost their churches, and were exposed to new persecution. Charles XII. of Sweden, forced the court of Austria to restore to the Lutherans more than 100 churches. The Catholics, however, remained predominant. After the conquest of Frederic the great, the Lutherans hoped to gain the upper hand, but Frederic preserved the *status quo* of the Catholic establishments, agreeably to his engagement, and it was only in 1810 that all the convents, with exception of those destined for nursing the sick, were secularized at the same time with the Lutheran clerical foundations. Catholics and Protestants now enjoy perfectly equal rights here, as in the rest of the Prussian monarchy. The Catholics have four bishops. There are 1,090,618 Protestants, comprehending Lutherans, Calvinists, Hussites, Moravians; and 885,278 Catholics in this country.

State of Education.] Silesia has a university, with a double theological faculty,—a Catholic and a Protestant; 10 Lutheran and Reformed, and 7 Catholic gymnasiums; a Jewish college; a college of Moravians; upwards of 3,400 city and parochial schools, and several seminaries and scientific institutions for particular purposes. The Catholic schools have been much improved by the abbot Felbiger;[17] and the consequences of a

[17] Silesia was a particular object of Frederic's care. Before the time of its conquest, education had seldom been made an object of attention by its former masters, the Austrian sovereigns, and, like the rest of Europe, this country was but scantily supplied with schools or teachers. In the small towns and villages, the schoolmasters were so poorly paid, that they could not subsist without practising some other occupation besides that of instruction, and they usually united the character of the village-fiddler with that of the village-schoolmaster. Even of these there were so few, that the children of the peasants in general, throughout the province, were left untaught. This was especially the case in Upper Silesia. Frederic issued an ordonnance that a school should be established in every village; and that a competent subsistence should be provided for the schoolmaster, by the joint contribution of the lord of the village and of the tenants themselves. The superintendence of the schools was prescribed as the duty of the clergy. But in order that this ordonnance might have its due execution, it was necessary to train teachers themselves. This was effected by the persevering intelligence and zeal of Felbiger, an Augustine monk belonging to a convent at Sagan; "a man," says a Silesian historian, "whom a great part of Germany must thank for a revolution, which, though of slower progress and milder features, than that produced by another monk of the same order, Luther, was yet of vast importance." Felbiger, after spending some years at Berlin, to obtain a perfect knowledge of the best method of instruction practised in the schools there, returned to Sagan, and made the convent to which he belonged a seminary for young ecclesiastics, and candidates as schoolmasters, for acquiring the knowledge of the improved mode of teaching. Several other institutions of the same kind were in due time established at Breslau, Glatz, and other places, upon his principles, and conducted by persons whom he had formed. To defray the expenses necessary for these seminaries, a fund is raised, consisting of one quarter's salary, which every Catholic curate is obliged to pay upon being first settled in a parsonage. With each of these seminaries are connected certain schools, where the young candidates for the clerical office, or for that of teachers, are obliged to attend, and observe the practice of the method, the theory of which they learn at the seminaries themselves. The clergy no less than the teachers are required to go through this process, because the superintendence over the teachers is committed to them. No young man can be admitted to either of the offices, without an attestation of his qualifications from one of the seminaries. After all these preparatory measures had been carried into effect, an ordonnance was published in 1765, prescribing the mode of teaching, as adopted in the seminaries; and the manner in which the clergy should superintend the efficacious establishment of the system. The regulations of this ordonnance, prove the earnestness with which Frederic laboured to spread the benefits of useful knowledge among his subjects. The teachers are directed to give plain

more general diffusion of knowledge, have been attested by many clear facts. Before the Seven years' war, there had scarcely ever been more than one periodical journal published in Silesia at one time. There were, however, in 1801, no less than 17 newspapers and magazines, which appeared by the day, the week, the month, or the quarter. At the former period there were but 3 booksellers, and all these in Breslau. But in 1801, there were 6 in that capital, and 7 established in the other cities; and the number of printing-presses and of bookbinders had increased in the same proportion. Besides the normal schools, an university at Breslau, and an academy of nobles at Lignitz, there are what we call grammar-schools, where Latin is taught, in almost every town of Silesia. However, the inferior schools, both of Catholics and Protestants, particularly in Upper Silesia, are not to be compared with those established in other parts of the Prussian dominions. The civilization of the higher classes is, in general, the same as in the rest of Germany, but the Catholics are certainly on the whole behind the Protestants. The inhabitants of the German side are also observed to be more industrious, and are by consequence more wealthy, than those on the Polish.

Topography.] Silesia is divided into 4 districts, which are again subdivided into circles.

1*st. The District of Breslau.*] This district extends to 247 German square miles. Breslau, the capital of the whole province, contains 3,695 houses, and has a population of 78,865 inhabitants, or, according to Balbi, 82,000, of whom about 5000 are Jews. Its fortifications have been changed into public walks. There is here a university, with 4 faculties; a library of about 100,000 volumes, which has been particu-

instructions, and up subjects applicable to the ordinary concerns of life; not merely to load the memories of their scholars with words, but to make things intelligible to their understanding,—to habituate them to the use of their own reason, by explaining the subject of the lessons, so that the children themselves may be able to explain it upon examination. The candidates for school-keeping must give specimens of their ability, by teaching in one of the schools connected with the seminary, in the presence of the professors of the seminary, that they may remark and correct any thing defective in the candidate's method. If one school suffice for more than one village, neither of them must be more than half a German mile, or 2¼ British miles distant from it in the flat country, nor more than half that distance in the mountainous parts. The school-tax must be paid by the lord and tenants, without distinction of religions. In the towns, the school must be kept the whole year round. It is expected that one month shall suffice to make the children know the letters of the alphabet, that in two they shall be able to join them, and in three to read. The boys must all be sent to school from their sixth to their thirteenth year, whether the parents are able to pay the school-tax or not. For the poor, the school-money must be raised by collections. Every parent or guardian, who neglects the sending of his children to school, without sufficient cause, is obliged to pay a double school-tax, for which the guardian shall have no allowance. Every curate must examine weekly the children of the school in his parish. A general examination must be held annually by the deans of the districts of the schools within their respective precincts; and a report of the schools, the talents and attention of the schoolmasters, the state of the buildings, and of attendance by the children, made to the office of the vicar-general, who must transmit all these reports to the royal domain offices. From these, orders are issued to the respective *landraths*, to correct the abuses, and supply the deficiencies indicated in the reports. This system was at first prepared and intended only for the Catholics, but has been adopted by all the Protestant consistories within the Prussian dominions. The truly respectable author of this system, Felbiger, was finally, with the consent of Frederic, invited to Vienna by the empress Maria Theresa and her son Joseph II., who appointed him director of the normal schools or seminaries in all the Austrian dominions. This circumstance is a complete confutation of Pinkerton's severe and unmannerly assertion, that Maria Theresa instituted schools for the education of children, but none for the education of teachers, Felbiger being appointed to the office of director, for the very purpose of training up teachers for the normal schools. His system has been introduced, and acted upon, in almost all the Catholic States of Germany.

larly increased by those of the secularized convents; a museum; a cabinet of natural history; a botanical garden; an observatory; three gymnasiums; and several scientific societies, and public libraries. Breslau is the centre of Silesian commerce; its principal articles of exportation are madder and linen.

2d. *The District of Oppeln.*] The Catholics form the majority of the population in this district, amounting to 470,162; while the Protestants only amount to 38,629. There are also 7,608 Jews. This district contains 238 German square miles. The town of Oppeln has 4,896 inhabitants.

3d. *The District of Reichenbach.*] This district contains 120 German square miles, with a population of nearly 250,000 Protestants, and an equal number of Catholics. Reichenbach, the chief town, contains 4000 inhabitants. The town of Gnadenfrei in this district, is a colony of the Moravians, and contains 800 inhabitants, but there are about 700 of the same sect in the neighbourhood. The town of Hirschberg, with 5,858 inhabitants, is 1,090 feet above the level of the Baltic. The circle of Hirschberg is by nature and art one of the most remarkable in Silesia. The Silesian part of the Giant Mountains lies in its circuit, which comprehends the highest points of the mountain, and its ridge forming the boundaries of Bohemia. Here are many remarkable points, and particularly the towering Giant or Schneekoppe, probably the highest mountain in Silesia, or of the middle part of Germany in general. There is a chapel on the summit, from which you see on one side the capital of Bohemia, and on the other that of Silesia; while beneath you, you look down on gloomy and deep precipices and ravines, which gradually widen into pleasant valleys. The country here is remarkable for its innumerable legends of Rübezahl, or Number-nip. Many chalets, or shepherds' huts, are dispersed over this part of the Giant Mountains, where there is pasture for the cattle, which forms one of the branches of industry of this part of Silesia where little corn is cultivated. This circle is the principal seat of the Silesian linen manufacture, in which the wealth of the inhabitants particularly consists. The town of Warmbrunn is 1,077 feet above the level of the sea; there is a boiling-spring here. Warthe, a small town on the Neisse, has a Catholic church, annually visited by about 40,000 pilgrims. Silberberg, an open town, with 860 inhabitants, in a narrow valley, 1,375 feet above the sea, is connected with the rock on which stands the celebrated citadel, which rises on five fortified points of rock, united by a vaulted alley, and surrounded by a ditch cut 70 feet deep in the living rock. It has accommodation in its barracks, which are all cut in the rock, for 5000 men, and did not surrender in 1807. Glatz, on the Neisse, has two forts on both sides of the Neisse, which are considered a master-piece in the art of fortification; and contains above 8000 inhabitants.

4th. *The District of Leignitz.*] The Wendes are numerous in this province. Leignitz, on the Katzbach, with 9,142 inhabitants, is the chief town. Grünberg, with 9,144 inhabitants, is one of the most important towns for the fabrication of cloth: 40,000 pieces are said to be annually made here.

IV. THE PROVINCE OF SAXONY.

The province of Saxony is bounded on the N. and N.E. by Brandenburg; on the S.W. by the kingdom of Saxony; on the S. by Gotha, Reuss, Weimar, and Hessen-Cassel; and on the W. by Hanover and

Brunswick. Some districts of this province, however, lie without these boundaries: viz. the circles of Henneberg and Neustadt in Saxony; Wolfsburg and the village of Bocklain in Brunswick; and the town of Benneckenstein in Hanover. And, on the other hand, the 3 duchies of Anhalt, and some districts of Schwarzburg, Weimar, and Brunswick, lie within its boundaries.

Physical Features and Soil.] The larger part of the province, viz. the whole district of Magdeburg to the S. W. extremity, and the larger eastern part of the district of Merseburg beyond the Saale, is one of the flat countries of the north of Germany, and has only a few hills. The smaller part of the districts of Merseburg and Erfurt is more mountainous, but is interspersed with large and fertile plains; the mountains are not of any considerable height, except in the circle of Henneberg, on the S.W. edge of which rises the Henneberg, the highest mountain of the N. of Germany. The soil is of various qualities; in the northern part of the district of Magdeburg there is a great deal of sand, and only along the rivers is found fertile soil; but the hilly grounds also bear good harvests. The eastern part is of the same quality; but the southern part of Magdeburg is a heavy clay, which is very fertile, and yields abundant harvests of rye and wheat.

Mountains.] The two largest chains of mountains in this province are the Harz, which runs on the S.W. edge of the district of Magdeburg, and have their highest point the Brocken here, and the Thüringian forest, which spreads over the circle of Henneberg.

Rivers, Lakes, and Canals.] The principal river is the Elbe; to its basin belong the Mulde, the Saale, a large navigable river, the Aland, and the Havel, which bounds the N.E. side of the province. The rivers on the S. and W. sides of the Harz belong to the basin of the Weser; among these are the Leine and the Aller. The province has several canals, among which are the canal of Plauen, the Schiffsgraben, and the Flossgraben. There are few large lakes; the principal ones are the salt and fresh water lakes in Mannsfeld, and the Arendsee which covers 2,170 acres. There are many fishponds and bogs; the most remarkable among the latter is the moveable bog called the Drömling, which has 129,343 acres of surface, but it belongs only partly to this province.

Climate.] The climate is everywhere temperate and healthy; it is coldest in the neighbourhood of the Harz.

Productions.] The productions are horses, cattle, game, fowls, corn, vegetables, potatoes, hops, madder, flax, tobacco, fruit, wood, silver, copper, lead, iron, salt, marble, slate, peat, and coal.

Agriculture, Industry, and Commerce.] Of all Prussian provinces, Saxony is the one in which agriculture has been carried to the greatest perfection. Corn forms the principal riches of the province, and Magdeburg is one of the granaries of the kingdom. The rearing of horses and cattle is not so important here as elsewhere; that of sheep is more so, and the breed has been greatly improved by merinoes. Mining is carried on for silver, copper, iron, and coals; but the most important mineral production is salt. Manufactures, though found in all towns of any importance, do not form a principal branch in the industry of this province. A brisk commerce is conducted in all the natural productions of the province, and the balance is decidedly in its favour.

Inhabitants.] The mass of the inhabitants are Germans; a part show traces of Wendish origin; there are also French colonists, but they

have been gradually blended with the Germans and Jews. The religion of the majority is Lutheran; there are 1,132,272 Protestants, 78,001 Catholics, and 3,242 Jews in Saxony. There is one university, and several gymnasiums—of which some have a particularly good reputation—besides a number of other town and parochial schools. The peasants in this province are very comfortably situated, and some of them are rich.

Topography.] There are 151 towns, 27 boroughs, 2,966 villages, and 1,010 hamlets and isolated farms in this province; which is composed of districts very differently situated, some of them having belonged for a long time to the monarchy, and others being new acquisitions made since 1815. The administration is the same as in the other Prussian provinces.

1*st. District of Magdeburg.*] There are 462,510 Protestants, 7,360 Catholics, and 2,142 Jews, in this district, which is divided into 15 circles. Magdeburg, the chief town, and the capital of the whole province, built on the left side of the Elbe, is one of the strongest fortresses of the monarchy, and contains a population of 36,650 inhabitants, who conduct an animated commerce, and carry on several manufactures. At Schönebeck, on the Elbe, a town containing 4,860 inhabitants, there is the most extensive salt-work in the whole monarchy, and one of the most important in Germany. The town of Guedlinburg, with 12,100 inhabitants, was formerly a rich nunnery, of which the abbess had a vote in the diet of the empire. There are great distilleries of brandy here. Wernigerode, with 5,016 inhabitants, belongs, with the surrounding lordships, to the count Holberg, under Prussian sovereignty. The castle of the count lies in a beautiful situation on a mountain 827 feet above the level of the sea; the library consists of 30,000 volumes, among which there is a collection of 2000 bibles.

2*d. The District of Merseburg.*] The number of Protestants in this district is 499,963, that of Catholics, 3,713. Merseburg, on the Saale, contains a population of 7,483 souls, and conducts some unimportant manufactures. In the cathedral is an organ with 4000 pipes; and in one of the suburbs a royal stud with 250 horses. The town of Laucksbedt contains a mineral bath, with good establishments for visitors. Lützen is celebrated by the battle of 1632, in the Thirty years' war, in which Gustavus Adolphus was killed. Halle, on the Saale, has a population of 24,000 souls. It is the seat of a university, with 42 professors. The library is said to contain 50,000 volumes. The orphan hospital, in which about 200 children are kept, and which was founded in 1695 by A. H. Franke, is one of the largest establishments of the kind in Germany; a library of 20,000 volumes, a museum, and a printing office, belong to it. There is a large establishment for education preparatory for the university, and an extensive bible society here. Wittemberg, a town on the Elbe, with 6,800 inhabitants, is illustrious in German history, as having been the scene of the Reformation in 1517. One of the oldest German universities, which existed here, was in 1817 united to that of Halle; in the church of the castle are the graves of Luther and Melancthon. Mühlberg, on the Elbe, is remarkable for the battle of 1545, where the elector John Frederic was made prisoner by Charles V. At the town of Eisleben, the house in which Luther was born is now employed as a school for poor children.

3*d. District of Erfurt.*] There are 170,199 Protestants, and 68,928 Catholics, in the district of Erfurt, and the chief town, which gives its

name to the district, contains 21,400 inhabitants. It is fortified, and has two very strong citadels. Langensalza, on the Salza, is the most important manufacturing town in the Prussian part of Thüringia.

V. THE PROVINCE OF WESTPHALIA.

This province belongs to the second large division of the Prussian monarchy, and is bounded on the N.W. by Holland; on the N. by Hanover; on the E. by Hanover, Schauenburg, Lippe-Detmold, Brunswick, and Hessen-Cassel; on the S.E. by Hessen-Cassel, Waldeck, and Hessen; and on the S.W. and W. by the province of Jülich-Cleve-Berg.

Physical Features and Soil.] The northern part of Westphalia belongs to the great plains of the north of Germany, and has only a few small elevations running from the Egge to the Weser. The southern parts from the south side of the Lippe, consists in a conglomeration of ridges of small mountains and hills, which run to all sides. The soil of the north part is mostly sandy, with some large moors, heaths, and bogs. In the southern parts, the soil, though not sandy, is frequently stony, and not always very productive. The mountains of this province belong to the lower chains of the Harz. The most remarkable are the Weser mountains: the Teutoburgerwald, a remarkable chain, which runs like a wall from the Rhine to almost the middle of the Ems; and the Porto Westphalien, a beautiful picturesque chain. The violence of the water has broken through the latter mountain about a mile to the south of Minden, and this opening forms the celebrated Porto Westphalien, or pass of Westphalia.

Rivers.] The largest river is the Weser, but it only flows on the western side, where it forms the boundary for about 60 miles. It then breaks through the Porto Westphalien, and runs for 28 miles through the district of Minden; it receives several small rivers as the Diemel and the Emmer. The next river is the Ems, which is not navigable, and receives no river of considerable size. The Lippe is partly navigable. The Röhr, which falls into the Rhine, was made navigable by Frederic II. and the Vechta, runs through the Netherlands into the Zuydersee. There are no lakes or ponds in this province, but a number of bogs, and some mineral springs.

Climate.] The climate is temperate and healthy; the air is more rough, but also more pure in the S. than in the N. where there are many bogs. The winter is everywhere cold and damp; in summer the heat is sometimes very great.

Productions.] Horses, and the common domestic animals, swine, in great number, fowls, game, corn, potatoes, vegetables, fruit, hemp, flax, copper, lead, iron, marble, lime, salt, peat, and coals, are the productions of this province.

Agriculture and Industry.] Agriculture is everywhere the principal branch of industry. The richest corn districts are the vicinity of Paderborn, the northern part of the duchy of Westphalia, and some districts of Minden and Münster. There are other parts where the soil is so stony that nothing but oats can be cultivated. Rye is the most common corn; from it is prepared the brown bread called *pumpernickel*, celebrated throughout Germany. The rearing of cattle is considerable, particularly herds of swine, which furnish the celebrated Westphalian hams. There are extensive salt-works; iron and linen are the most important articles of manufacture.

Inhabitants.] The inhabitants are all of the Low-German race. There are about 638,259 Catholics, 425,976 Protestants, and 9,721 Jews. In a great part of the country the inhabitants live dispersed in small isolated farms. The Catholics have two universities, one at Münster, and one at Paderborn; they have also seminaries for the clergy, gymnasiums, and elementary schools. The Protestants have gymnasiums, and city and parochial schools; but the state of general information, and school-establishments, is here decidedly inferior to other Prussian provinces, and the inhabitants stand lower in civilization than in most other parts of the monarchy.

Topography.] Westphalia is divided into 3 districts, subdivided into circles. It contains 128 towns, 60 boroughs, and 4,045 villages.

1*st. District of Münster.*] The number of Catholics and Protestants in this district are nearly equal. The chief town of the whole province is Münster, on the Aa, with 18,218 inhabitants. It is the seat of the government, and contains a Catholic university, several colleges, and schools, and a public library. Warendorf, on the Ems, with 3,958 inhabitants, conducts extensive cotton, silk, worsted, and linen manufactures.

District of Minden.] There are 36 towns, 7 boroughs, 589 villages, 812 hamlets and isolated houses, in this district, which is divided into 12 circles. The chief town is Minden, upon the Weser, over which is a bridge 600 feet in length. The population of this town is 9000 souls. It possesses several manufactures, among which are large sugar-refineries, and conducts a pretty extensive commerce upon the Weser. In the town of Bielefeld there are some extensive linen-manufactures, of which the beautiful damask table linen is highly celebrated. The whole population here are employed in the staple manufacture of linen; the flax is spun in the adjacent villages, and the town itself is surrounded by very extensive bleachfields. The ancient town of Paderborn, upon the Pader, the seat of a bishop, contains nearly 6000 inhabitants. The Catholic university, founded here in 1615, has only two faculties,—theology and moral philosophy. The small town of Driburg, situated in a fine romantic country, possesses a mineral spring, which attracts a number of visitors. Corvey was formerly a magnificent convent of Benedictines, the most ancient in Westphalia, of which the abbot was a bishop and prince of the empire, with a vote in the diet. The cathedral here is very magnificent, and it is still the seat of a bishop.

3*d. The District of Arensberg.*] There are 202,766 Protestants, 178,826 Catholics, and 3,489 Jews in this district. Arensberg, the chief town of the whole province, contains 3000 inhabitants. The Ruhr flows around it. It was a flourishing town in the middle ages. Dortmund, on the Emscher, with 4,476 inhabitants, an ancient independent town, formerly belonged to the Hanseatic league; it lost its independence only in 1802.

VI. THE PROVINCE OF CLEVE-BERG.

The province of Cleve-Berg is bounded on the N. by the Netherlands; on the N.E. and E. by the province of Westphalia; on the S. and S.W. by the province of the Lower Rhine; and on the S.W. by the Netherlands. It is the smallest of all the Prussian provinces, but it is the most populous in proportion to its extent: possessing a population of 983,000 souls on a superficial extent of territory not exceeding 3,450 British square miles.

Physical Features.] The Rhine divides this province into two parts. The right banks of the Rhine are here steep and rugged; the left have some hills, but also beautiful fertile plains; the northern district is quite flat and intersected with bogs.

Mountains.] The principal chain is the Westerwald, of which the different branches cover the whole eastern parts, but the highest point rises not more than 2000 feet above the level of the sea. With this chain is connected the Siebengebirge, or 'Seven Mountains,' a chain extending along the Rhine, from which seven conic mountains, among which the Lowenberg of 1,896 feet, the Oelberg of 1,827, and 'the castled crag of Drachenfels' 1,473 feet in altitude, are the most remarkable.

Rivers.] The principal river of the province is the Rhine, which here

> ———'nobly foams and flows
> The charm of this enchanted ground.'

All the other rivers, except the Maes, belong to its basin; the most remarkable are the Lippe and the Ruhr, which are also navigable; the Erft and the Neuss are partly navigable. The Maes, or French *Meuse*, receives only the Nieres.

Climate.] The climate is temperate; the air on the right side of the Rhine is pure and healthy, but on the left side it is more damp.

Productions.] Game, fish, bees, corn, vegetables, tobacco, fruit, wine, wood, flax, iron, lead, coals, marble, and slate, are the productions of this district. The soil is in general not favourable for agriculture, the mountains being too stony, and the valleys too narrow for the operations. Flax is one of the principal objects of agriculture. Wine is manufactured in the neighbourhood of Bonn: but neither in large quantities, nor of very superior quality. The rearing of cattle is, like the production of corn, not sufficient for the consumption. Mining is not very productive, except the working of coals.

Industry and Commerce.] With so little production this province would be badly off, if the industry of the inhabitants did not make up for what nature has denied them. It is not only the most industrious part of the whole Prussian monarchy, but of all Germany. The district of Berg has been by travellers described as 'England in miniature.' The principal manufactures on both sides of the Rhine are broadcloth, worsted, silk, linen, cotton, ribbons, leather, soap, paper, tobacco, and brandy; on the right exclusively iron, steel, copper, and brass. The commerce is flourishing; the exportation consists in the manufactures of the country; there is also a very important commerce by commission and transit from and to Holland.

Inhabitants.] The inhabitants are all of German origin. The majority are Catholics, whose number are estimated at 657,047; the Lutherans and Calvinists amount to 268,787; there are also 8,372 Jews, and some other sects. Among the establishments for education here, besides the newly formed university at Bonn—already one of the best in Germany—there are a number of gymnasiums, high schools, and parochial schools. These establishments were on the whole in a very neglected state when this province came under the Prussian government, but they are already better organized and are daily improving.

Administration.] The administration has been for the most part organized on the same footing with the other Prussian provinces of Germany; but several ancient institutions have been permitted to

remain, and in particular the French code of law, though it also is, as we believe, to be abolished gradually, and the whole placed on the same footing with the rest of the monarchy.

Topography. This province contains 65 towns, 30 burghs, and 1,077 villages; and is divided into 3 districts.

1*st. The District of Cleve.*] Cleve, the chief town of this district, contains 6,736 inhabitants. Emmerich, on the Rhine, conducts an animated commerce, and possesses a port on the river with 40 or 60 vessels. The town of Kempen is celebrated as the birth-place of Thomas a Kempis, and of the historian Gellenius.

2*d. The District of Duesseldorf.*] This is the most populous district in the monarchy, containing 632,000 inhabitants, on a superficial extent of territory only amounting to 2,100 British square miles. There is a flying bridge over the Rhine at the town of Duesseldorf, which contains 27,000 inhabitants. The fortifications of this town have been demolished and changed into public walks. It is surrounded by fine gardens, and is very regularly built. There is a gymnasium, drawing academy, commercial school, 20 elementary schools, and a theatre here.—St. Elberfeld, on the Wipper, with 25,000 inhabitants, is an important manufacturing town, with 100 larger or smaller manufactories, particularly those of cotton, silk, lace, thread, &c. There is a Bible society here.—The town of Solingen is celebrated for its iron manufactures, particularly of knives and swords, which latter are hardened in such a manner that iron can be cut through with them without damaging the blade in the least. Remscheid is a staple place for iron and steel wares. There are every year exported 40,000 scythes from this place.—Crefeld, with 14,291 inhabitants, among whom are 200 Mennonites, contains several manufactories of velvet, silk, and ribbons, employing upwards of 300 looms. Around the town are more than 2000 gardens.

3*d. The District and City of Cöln or Cologne.*] Cologne, once the capital of an archbishopric and electorate,—afterwards subject to France, and included in the department of the Roer,—but now in the Prussian territory—is an ancient, decayed city, built in the form of a crescent on the left bank of the Rhine, and containing, according to M. Balbi, 64,000 inhabitants. On account of the wealth, number, and splendour of its clergy,—the ignorance, superstition, and intolerance of its inhabitants,—the vast variety of its churches, chapels, monasteries, nunneries, and relics, with their legends and miracles, Cologne was once denominated 'the Rome of Germany.' In the beginning of the last century there were reckoned to be no less than 365 churches within this city. At present Cologne is said to have 34 gates, 10 collegiate churches, 49 parish churches, 4 abbeys, 22 nunneries, 57 convents, 50 chapels, and 16 hospitals, all well-endowed; and most of the houses belonging to the canons and prebends have large gardens and vineyards belonging to them. In the cathedral they pretend to show the tomb of the three wise men who came from the east to worship our Saviour, and who are hence called 'the Three Kings of Cologne.' The tomb of St. Ursula, and her 11,000 virgins, who came from Britain to convert the Pagans in these parts, and were all murdered by the Huns, is shown here. The bones of the virgins are hung upon the walls of St. Ursula's church, in great order; some of the heads most noted for miracles are kept in cases of silver, others are covered with cloth of gold, while some of them have caps of the same material, and velvet. These are ample specimens of



VIEW OF COLOGNE

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Catholic credulity and clerical imposture in the very vicinity of Protestantism. Cologne was formerly one of the Hanse towns, and enjoyed an extensive inland and foreign commerce by means of the Rhine. But its commerce has long since fallen into decay; and all that now remains of its trade, is the manufacture of a few ribbons, stockings, lace, and some tobacco. In consequence of this, two-thirds of the city have fallen into ruins; and streets and squares have been converted into kitchen-gardens and vineyards. This decline is chiefly owing to the intolerance and power of the clergy, who would allow no dissenters to dwell in Cologne, and incited the inhabitants first to expel the Jews, and afterwards the Protestants, who were the principal merchants. The inhabitants account it their chief glory that they withstood the Reformation, even though two of their archbishops embraced it. The cathedral is a masterpiece of Gothic architecture, but only half-finished; the nave is supported by 100 pillars. There is a gymnasium in this city, with a library of 60,000 volumes, and a botanic garden. The celebrated *Eau de Cologne*, of which 80 to 90,000 bottles are sent abroad every year, is manufacured here; there are also 60,000 hogsheads of Rhenish wine annually sold. Cologne is the birth-place of the celebrated painter Rubens; and it was here that the monk Barthold Schwarz invented gunpowder in 1330.—Bonn, on the Rhine, contains 11,000 inhabitants. There is a magnificent castle here, and an excellent university. The country along the banks of the Rhine is very beautiful and romantic.

VII. PROVINCE OF THE LOWER OR UNDER RHINE.

The province of the Lower Rhine is bounded on the N. by the province of Cleve-berg; on the N.E. by the province of Westphalia; on the E. by the duchy of Nassau and the grand duchy of Hessen; on the S. by Bavaria, Hessen-Homburg, the principality of Berchenfeld, and France; and on the W. by the Netherlands.

Physical Features.] The surface of this province is on the whole mountainous, and the mountains are covered with woods. The districts on the Rhine, Moselle, and Saar, are beautiful and fertile. The country in general presents rich picturesque scenery. The more sterile parts are on the Hundsruecken and the Eifel. The soil is on the whole rather light. The mountains belong mostly to the chain of the Warzau; the principal ridge is the Hundsrueken between the Moselle and the Rhine. A continuation of it is the Eifel. With the Eifel is connected the lofty Veen, the highest district on the left banks of the Rhine, which rises about 2,150 feet above the level of the sea, forming a bleak sterile mountainous country, intersected with peat-moors and bogs. On the western side of the province are some branches of the Ardennes, which decline towards the Moselle.

Rivers.] The largest river is the Rhine, into which flows the second principal river, the Moselle; other smaller rivers are the Saar, which is navigable, the Salune, the Sure, the Nahe, the Lahn, and the Roer. There are no lakes, even those which bear this name are merely ponds. There are many mineral springs, but only those of Aix-la-Chapelle have any reputation.

Climate.] The climate is cold and dry on the heights, and more damp but warmer in the valleys and plains.

Productions.] Game, fish, bees, corn, Turkish corn, poppies, turnips, potatoes, vegetables, fruit, vines, and wood, copper, lead, iron, quick-

silver, porphyry, galena, marble, silk, coals, and peat, are produced in this province.

Agriculture, Industry, and Commerce.] Agriculture stands not on a high scale in this province; some parts, however, have been greatly improved since it came under the Prussian dominion; this may be particularly said of the culture of the vine at the Moselle. The wine of this part of the country has been considerably ameliorated, and is now exported like the Rhenish wine. Flax is a staple ware, and so is wood. The district of Aix-la-Chapelle has very extensive manufactures, which are animated and facilitated by the navigable rivers and good high roads.

Inhabitants.] The inhabitants are of the High German race, except the Jews and the Walloons who live on the W. boundaries, and speak French, which language is everywhere understood on the southern limits of the province, and has in many parts entirely superseded the German. The majority of the inhabitants are Catholics, whose number may amount to 800,000; the Protestants do not exceed 170,000; the Jews are estimated at 10,469. In general the establishments for education, particularly those for the elementary instruction of the lower classes, were in a much neglected state when this province came under the Prussian dominion; but they have already been ameliorated, and are daily improving.

Administration.] This province is composed of districts, which, before its incorporation with France, had very different governments. The French forms of administration have been partly preserved, as well as the French code; but it is expected that the whole will gradually be changed into the general mode of Prussian administration.

Topography.] The province is divided into 3 districts, containing 64 towns, 63 boroughs, and 5063 villages and hamlets.

1*st. The District of Coblentz, or Coblence.*] Coblentz, the chief town of the whole province, is beautifully situated at the junction of the Rhine and Moselle. It contains 15,000 inhabitants, and conducts several manufactures. There is a remarkable aqueduct here. Coblentz lies on the left banks of the Rhine, and is fortified; opposite on the right side of the Rhine, lies the strong citadel of Ehrenbreitstein.—The Moravians have a large establishment at Neuwied; here is also a museum of Roman antiquities which have been found in the neighbourhood, and of objects of natural history collected by the prince of Neuwied. The population exceeds 4,600.—St. Goar, with 1059 inhabitants, conducts a very animated commerce, and has an important salmon-fishery; there is a beautiful whirlpool here in the Rhine called St. Goarsbank. On a high rock above the town is the ruined fortress of Rheinfels.

2*d. District and City of Aix-la-Chapelle.*] Aix-la-Chapelle, called *Aachen* by the Germans, derives its more common appellation from a chapel built in the cathedral or great church, in honour of the Virgin Mary, by Charlemagne, and much visited by pilgrims on account of the multitude of its relics. Originally a Roman colony, but destroyed by the invading Huns, it owed its restoration and future celebrity to Charlemagne, who made it the place of his residence. Delighted with its pleasant situation in a charming valley environed by hills, its mineral waters, and its hot baths, he rebuilt the city, erected a palace, and founded a collegiate church. It was not only honoured with his frequent presence, but dignified by him with all the privileges of an imperial city;

and the remains of its illustrious founder lie interred in the cathedral which he founded. Amongst other privileges granted by its benefactor, that of the coronation of the emperors was one. Here the emperor was crowned with the same ceremonies as at Milan and Rome. Here he received the silver crown, at Milan the iron crown, and at Rome the golden crown. Charlemagne was not only a canon of his own cathedral at Aix-la-Chapelle; but ordained that all his successors in the imperial dignity should be canons of this cathedral also. The town-house is a very fine structure of freestone, built in 1353, and adorned with statues of all the emperors since the days of Charlemagne. In the middle, and immediately in front of the town-house, is a stately fountain, remarkable for its largeness and excellent architecture. It has four springs running continually from above into a large brazen cistern, 30 feet in circumference, and weighing 12,000 lb. From thence it runs by six pipes into a large stone cistern, whence it is conveyed through the city. On the top of this fountain, is a large brazen statue of Charlemagne in armour. The cathedral is a large Gothic structure. It has a lofty steeple at the west end, adorned with several pyramids, and surmounted with a large globe and cross. The interior is beautified with a vast number of pillars of brass, marble, and granite, gilded statues, brass doors, and partitions. The whole city is a league and a half in circumference, and may be divided into the inner and the outer city; the former being separated from the latter by a wall with ten gates, and three-fourths of a league in circumference. The other wall, which encloses the whole, has eleven gates. It is well-supplied with water; and, though lying in a hollow, the air is salubrious. The stone and marble quarries in the neighbourhood supply the inhabitants with materials for building. The greater part of the inhabitants embraced the Reformation; but the city being taken by the famous Spinola, the Protestant citizens were expelled, and Popery re-established. There are above 30 parish-churches in the city; the territory belonging to its jurisdiction, contains 18 villages, and 20,000 acres of land, called the kingdom of Aix-la-Chapelle. It has suffered a variety of changes and misfortunes since the time of its restorer, Charlemagne. Its greatest calamities, however, were those which it suffered during the war consequent upon the French revolution. There are 8 hot baths here, the temperature of which range from 30° to 51° Reaumur. Among the manufactures, those of needles and pins are famous. Treaties of peace were concluded at Aix-la-Chapelle in 1668, and 1748; and in 1818 the founders of the holy alliance held their congress of infamous memory here. It lies 40 miles west of Cologne, and 75 miles east of Brussels. N. Lat. 50° 45′, and Long. 6° 3′ E. of Greenwich, and contains, according to M. Balbi, 35,000 inhabitants.—The town of Julich or Juliers, on the Roer, is fortified.

3d. *The District of Trier or Treves.*] The chief town of this district is Trier or Treves, on the Moselle. It is one of the oldest towns of Germany, and was a considerable place under the Romans, who gave it the name of *Trevirorum Civitas.* It now contains above 15,000 inhabitants, and is the seat of a bishop.—Saarlouis, on the Saar, contains 6000 inhabitants. It was built by Louis XIV. and strongly fortified by Vauban.—In the neighbourhood of Saarbruck are inexhaustible forests and coal mines, both of which furnish important articles of exportation.

CHAP. IX.—THE KINGDOM OF BAVARIA.

THE original country of the Bavarian monarchy is the duchy of Bavaria, which has its name from the first inhabitants the Boii or Bojoarians, of whom it is not certain whether they were of Celtic or German origin. This division of Germany, once a circle, a duchy, and an electorate, prospered and grew into a kingdom under the fostering care of Napoleon Bonaparte, who enlarged its territories at the expense of Austria and Prussia, and the neighbouring petty princes of the Germanic body, especially those of the spiritual order. Two large tracts of country, of which the contiguity is interrupted by the districts of Baden and Hessen, form this country. The largest lies in the heart of Germany, the smaller on the left banks of the Rhine. The former is bounded on the N.W. by Hessen Cassel; on the N. by the duchies of Saxony, and by Reuss; on the N.E. by the kingdom of Saxony; on the E. and S. by the Austrian dominions; and on the W. by Wirtemberg, Baden, and Hessen. The latter is bounded on the N. by the Prussian province of the Lower Rhine, and by the Hessian provinces of the Rhine; on the E. by the Rhine; on the S. by France; and on the W. by the Lower Rhine. The territorial surface is, according to Hassel, 1,453.91 German square miles, and the population, which can only be given by approximation, about 3,514,000.[48]

History.] Bavaria was subjected to the Roman sceptre under the name of *Vindelicia* and *Noricum*, and when Theodoric, after having conquered Odoaser, founded a new Eastro-Gothic empire, Bavaria was included in it. After the fall of that monarchy, the Bavarians were conquered by the Frankish king Theodoric of Astrasia; but they preserved the prerogative of choosing their own chiefs; of whom it is not quite ascertained whether they went under the name of kings or dukes. We find, about the year 556, the family of the Agilolfingians possessing this dignity, which they held till the end of the 8th century. We observe among them Odilo, the son-in-law of Charles Martel, under whose reign, in the middle of the 8th century, the archbishop Bonifacius divided the Bavarian clergy into four bishoprics, namely, Salzburg, Passau, Regensburg, and Freysingen. Tharsilo II. who succeeded in 748, was obliged to swear allegiance to Pipin at Compeigne, and having been afterwards accused of rebellion against Charlemagne, was, by the diet of Ingelheim, condemned to death, but sent into a convent, and with him the dynasty of the Agilolfingians was extinguished. Charles abolished the dignity of duke of Bavaria, and named his brother-in-law, the count Gerold, governor of this province, into which he introduced the Frankish feudal system, and the division into *gaus*, governed by Grafen or counts. Bavaria afterwards fell to the portion of Louis the German; and upon his death in 840, his son, Carlomann, was named king of Bavaria. With Louis IV., who died in 911, the Carlovingian race was extinguished, and Arnulph II., son of the Bavarian general Luitpold, assumed the dignity of duke, and the sovereign power. Under his successors Bavaria was a scene of perpetual contention. In 1071, Welph, son of Azo of Este, became duke of Bavaria, which, in 1138, passed to the house of Austria, but in 1154 returned to the house of Welph, in the person of Henry the Lion.

[48] Stein estimates the territorial surface at 1,338.25 German square miles, and the population at 3,317,691. Each German mile is equal to 20 English miles.

In 1180, it finally returned to the first family, by the accession of Otto of Wittelsbach, a descendant of Arnulph II. duke of Bavaria, after the family had been unjustly deprived of the government for two centuries. The emperors, Louis in 1314, and Charles VII. in 1740, were of this family. The first palatine of the Rhine was Eberhard of Franconia, in 925. In 1385, the palatinate family purchased the reversion of the domains of Deuxponts from Everhard, the last duke a descendant of Otto of Wittelsbach. In 1444, the palatinate was united with Veldentz. In the 13th century, the Bavarian family obtained the palatinate by marriage, and from it the modern family has descended. Frederic V. elector palatine, married Elizabeth, daughter of James I. of England, and aspired to the crown of Bohemia, but was vanquished, his dominions ruined, and the electorate transferred to the house of Bavaria. Yet, by the treaty of Westphalia, his son regained part of his dominions, and was created an eighth elector. In 1685, the duke of Neuburg, a branch of the Bavarian house, succeeded to the palatinate, by the death of the last prince without children. This was an unfortunate event for the inhabitants of the palatinate, as the family of Neuburg were staunch Catholics, whereas the princes of the palantine house had been zealous Protestants. By the death of Emeric Joseph, the last elector of Bavaria, without children, Charles Theodore, elector palatine, of the house of Neuburg, succeeded to the Bavarian dominions; and thus two electorates were united in his person, namely, those of Bavaria and the Rhenish palatinate. Charles Theodore died in 1797, and was succeeded by his nephew, then duke of Deuxponts, the father of the present Bavarian sovereign, who assumed the government under the name of Maximilian Joseph, in 1799. He ceded, in the peace of Luneville, the provinces on the left banks of the Rhine to France, and several other districts were given in indemnification to other countries. But, on the other hand, Bavaria was aggrandized by the secularization of the estates of the clergy in 1803, by acquisitions at the peace of Presburg in 1805, by the foundation of the Rhenish confederacy in 1806, and by the peace of Vienna in 1809. In the peace of Presburgh, the royal title was acknowledged for Bavaria, and by its close connexion with France, it rose to be the first state in the Rhenish confederacy. But when, after the Prussian campaign, the whole of Germany rose against France, Bavaria, by a treaty with Austria, concluded on the 8th of October, 1813, joined the cause of the allies, for which Austria guaranteed to the king the integrity of his States. At the congress of Vienna, the former Prussian principalities of Anspach and Baireuth were conceded to Bavaria, but the king was obliged to relinquish the Tyrol and Vorarlberg to Austria, for which he obtained Wurzburg and Aschaffenburg. Other exchanges again took place, till at last, at the general assembly in Frankfort on the 20th July 1819, matters were finally settled, and the integrity of Bavaria, as a country of the German confederacy, fixed to the territory, now possessed by the king. On the 26th of May 1818, Maximilian granted a constitution to his subjects, of which we shall speak hereafter; and in February 1819, the first convocation of the States was held at Munich. Maximilian had the best intentions, and really did much good to his country, in which he was very popular. He died lately, and has been succeeded by his son Louis I. who has already excited great hopes by the truly liberal sentiments he has shown.

Physical Features.] Bavaria is generally a level conuntry except towards the south, where it is very mountainous; here, as it borders on

Salzburg, Tyrol, and the Vorarlberg, it partakes of the wild and rugged nature of these Alpine regions. But though it is generally an open level, it is the highest and most extensive level land in Germany. It may be considered as a vast plain—the bed, perhaps, of an ancient lake—extending from the Alps of Tyrol, to the foot of the Fichtelgebirge on the north, the country sloping on both sides to the Danube, the great drainer of the waters of southern Germany. The general height of these plains is 1650 English feet above the level of the sea.

Mountains.] The Bavarian mountains belong to the two grand German chains. To that of the Alps belong the Noric Alps, the Arlberg, the Allgau Alps, the Spessart, the Steigerwald, the Rhön, the Fichtelgebirge, and the Thuringian forest, of which only one point belongs to Bavaria. On the Rhine, the duchy of Deuxponts is a mountainous region, being intersected by the grand chain of the Vosges, which, towards Germany are steep and rugged, whilst towards France they have a gradual slope or gentle declivity. They present numerous defiles and narrow passes, particularly the defile of Keyserslautern, famous in the commencement of the revolutionary war, as the scene of many sanguinary and hot contested engagements between the French and Prussians.

Rivers.] Bavaria is in general very well watered. The principal rivers are the Danube, to the basin of which belong the Iller, the Lech, the Wertach, the Iser, the Inn, and the Salzach; the Rhine, to the basin of which belong the Lauter, the Queich, the Nahe, and the Blies. The Mayne, a principal river of the N. of Bavaria, also belongs to the basin of the Rhine; its tributary rivers are the Regnitz, the Rodach, the Itz, the Kinzig, the Lohr, and the Tauber. To the basin of the Weser belongs the Fulda; to that of the Elbe the Eger and Saale; these three rivers have their sources in the kingdom. There is no navigable canal except the one which unites the Frankinthal with the Rhine.

Lakes.] The southern part of Bavaria abounds in forests, lakes, and morasses. There are estimated to be no less than 16 large lakes, 160 smaller lakes, 275 rivers and streamlets, 360 forests, and a number of fish-ponds, in this country. Besides the lake of Constance—of which only a small part belongs to Bavaria—the most considerable are the Chiemsee, the Wuermsee, the Kochelsee, and the Zellersee; but as they are of comparatively little importance, they merit no particular description.

Morasses.] Among the great number of bogs or mosses which are in the S.E. circles, the most remarkable is the moss of the Danube, covering above 70 English square miles; the moss of Erding, said to exceed 100 square miles; and the moss of the Iser, nearly 30 miles long, and 12 broad. These morasses are partly overgrown with rushes, and only in a few parts present peat.

Climate.] The climate is on the whole temperate and healthy; the air, is, however, sharp in some parts, on account of the considerable elevation. In the valleys, along the Danube and Mayne, there is a very mild climate, and in the Rhenish provinces. In some of the valleys of the Mayne, even chesnut and almond trees are found.

Soil and Produce.] The southern, or the Upper Bavaria, though very mountainous, is by no means so unfit for cultivation, as has been generally supposed. Amidst these rugged and stupendous mountains, where the ideas of stability and grandeur only are excited, the eye is frequently relieved by beautiful valleys, whose soil is so rich as to repay more than six fold even the awkward and unskilful culture of a Bavarian

farmer. The tract of country which stretches from Munich, along the banks of the Danube and Inn, is the finest arable land in Bavaria, and is beautifully diversified with hills, which are clothed to their summits with magnificent forests. The upper palatinate, on the north of the Danube, is a connected chain of mountains, rising gradually from the Danube to the Fichtelgebirge and the mountains of Bohemia; yet these lands afford excellent pasturage, and are in many cases susceptible of every kind of culture. Of this country, so highly favoured by Providence, a great portion is allowed to remain in a state of nature. There are vast tracts of land which are considered by the inhabitants as marshes, but in many of which the traces of ancient furrows still remain to reproach their negligence and indolence. There is another part of Bavaria covered with a fine forest; whilst a third part, without any apparent reason, is always left in fallow. Upon the whole, it is probable that not more than half the country is under proper cultivation. A German journalist informs us, that agriculture is so much neglected in Bavaria, that except in good years, it does not produce grain sufficient for its own consumption; whilst in the comparatively barren district of Deuxponts, as much grain is raised by its industrious peasantry as suffices for their wants. Fruit is produced in great quantity, and the culture of it goes on increasing, particularly in the circles of Rezat, the Mayne, and Rhine; whole cargoes of dried fish and fruit are exported. Wine is one of the principal productions of the Lower Mayne circle, it is also produced on the banks of the Lake of Constance, on the Rhine, in the Upper Mayne, and Rezat circles; wood is a staple ware, and the rearing of the forests engages many thousands of people. Hops are cultivated in some places, and flax to a great extent in the tract called the Bavarian forest, which also furnishes great quantities of garden-vegetables, particularly cabbage and turnips. The wretched state of agriculture in this country was to be ascribed some years ago to the ignorance of the secular and ecclesiastical proprietors, and to the foolish administration of the officers of government. The farmers were divided into three classes; namely, those who were so called, by way of eminence, and who must have at least eight work horses, and are surnamed *einseidler* or hermits, because their farms are always at some distance from any town or village. Many of these farmers had an extent of three miles square, and employed from 12 to 15 plough-horses. Of this class, there were about 40,000. The second class, called half-farmers, consisted of those who had four horses. The third class, called quarter-farmers, had only two horses. A fourth class, called *haussler*, were only day-labourers, who wrought for the other classes, and had no plough-horses of their own. Besides these obstacles to the progress of agricultural improvement, a very injudicious and oppressive mode of taxation prevailed. No exemption was made in favour of the poorer class of labourers, who were taxed to the utmost of their slender means, and at the very same rate as their wealthier neighbours. The prodigious veneration paid to the monks was another cause tending greatly to retard agricultural improvement. An income exceeding one-third of the whole revenue was engrossed by these lazy locusts, who enjoyed also a complete immunity from all taxation. The present government has, however, effected a great amelioration on the state of the agriculturists, and in a few years, it is to be hoped, the resources of this valuable country will be fully called into action.

Animals.] Of animals, Bavaria produces the common domestic animals, game, chamois, a few bears, fowls wild and domestic, fish. bees. The rearing of cattle is one branch of industry; it is particularly carried on in the Alpine Mountains; horses and sheep are scarce, swine, very numerous, goats in great number; of fowls, geese are the most important; fishing is very productive; and bees are kept to a considerable extent.

Minerals.] Bavaria, though not so abundant in minerals as the Austrian or Hanoverian dominions, is by no means deficient in them and in metals. The mountains in the south contain quarries of marble. Alum and charcoal are likewise produced in this country. The duchy of Deuxponts, and the palatinate on the west of the Rhine produce more minerals than all the other Bavarian dominions put together. It is a common observation, that where minerals are abundant, the soil is poor. Deuxponts is full of barren and bleak mountains, which are, however, rich in metals, especially mercury in all its varieties. The mountains which contain the mercury, embrace a district of 10 or 12 leagues in length, from Wolffstein, on the Lauter, 25 British miles north of Deuxponts, to Creutznach, on the Nahe, and seven or eight leagues in breadth. In this territory, among numerous mines of quicksilver, are those of Stahlberg, Donnersberg, Moschillandsberg, Morsfeld, Wolfstein, which have been wrought for many centuries. The adjacent part of the palatinate also contains similar mines, particularly the mountain of Potsberg. The annual product of these quicksilver mines may be estimated at 67,200 lbs. of mercury; and the revenue, after deducting expenses, at 127,517 livres. The mountains composing the above district are of a reddish brown, or grey sandstone. Out of the sands of the Rhine, near Germersheim and Sels, is washed gold; titanium is found at Bodenmais. The whole annual produce of iron from the Bavarian dominions and the Tyrol was estimated at 110,000 quintals of 100 lbs. each. Lead is a rare metal in Bavaria. Copper-glance is obtained in the mines of Deuxponts; but the whole amount of copper annually produced, does not exceed 3,000 quintals, and a great part of this came from the Tyrol, now reverted to its ancient sovereigns. But the chief mineral riches of Bavaria consist in the salt springs at Traunstein, which occupy many people in productive industry. Other salt-springs also occur at Reichenhall, where the spring is known by the name of 'the Bounty of God.' They are wrought by very curious machinery, and their weekly produce is valued at 500 guelders. In the principality of Baireuth, are a great number of caverns full of the bones of unknown carnivorous animals supposed by Cuvier to have perished from the volume of creation; at least when examined by that ingenious and scientific anatomist, along with other eminent naturalists, they were declared to belong to no order of animals presently existing on the face of the globe.

Manufactures and Commerce.] In a country where agriculture is so little understood, neither manufactures nor commerce can be expected to flourish. Even the manufacture of woollen cloth, which, in such a climate as that of Bavaria, is one of the most necessary articles of dress, is almost entirely neglected. More than a century ago, 7000 pieces of woollen cloth were annually fabricated in this country, whereas at present it can scarcely produce 5000. One of the chief articles of Bavarian exports is wood, which is floated down the rivers, and conveyed by the

Danube to Hungary. Tobacco, which is manufactured throughout the whole of this country, affords likewise a considerable traffic. The other articles of exportation are salt, corn—of which only a very small quantity is exported—rough hides, raw wool, flax and hemp. The bishopric of Bamberg having a rich and fertile soil producing more grain than what the inhabitants consume, exports a considerable quantity of that article, as also fruits, saffron, and liquorice, which last is esteemed the best in Germany. The national industry, like all other matters, has been greatly promoted in Bavaria by the exertions of the government during the last 20 years. The commerce of Bavaria has never been of great importance, although it is favourably situated for transit and commission; and the importation is so considerable that the balance can scarcely be said to be in favour of the country. The navigable rivers and excellent high roads, as well as the good organization of the post, will eventually increase the commerce of this country.

Inhabitants.] Bavaria returned its population to the Diet of the German confederacy at 3,500,000. There are 229 towns, 399 boroughs, 2,920 large villages, and 28,449 smaller villages and hamlets in the country. The inhabitants—with the exception of a few French who live dispersed in the country, and do not exceed the number of 3000, and about 15,000 Jews—are all of German origin, and belong to four different tribes. The *Bavarians* are a stout race of men, of a rude and heavy appearance, but upright, patriotic, and honest; the *Franconians* are a more refined, lively, and enterprising race; the other two tribes are the *Rhenish Germans* and *Suabians*.

Religion—State of Education.] There is no longer any established religion in Bavaria; entire freedom of conscience is now allowed, and Catholics and Protestants enjoy perfectly equal rights. The Catholics, however, form at least four-fifths of the population. They have, according to the concordat of 1817—which was recognized as the law of the country in 1821—archbishops and bishops named by the king: their annual revenue may amount to about 300,000 florins. There are 191 deaneries, and 2,512 Catholic churches. The Protestants are almost all Lutherans. They are governed by a consistory, and have 1,036 parishes. The establishments for education were, under the last government, and still are, an object of special care, and have made very rapid progress. The new university at Munich promises to be one of the most extensive and most liberal establishments of the kind in Europe. There are universities also at Landshut, Wurzburg, and Erlangen. The royal academy of sciences at Munich is a celebrated institution. It extends its transactions to all subjects of science, and more particularly to those belonging to the sciences of philosophy, philology, mathematics, natural philosophy, natural history, astronomy, universal history, and the history of the kingdom of Bavaria in particular. The sciences of theology, jurisprudence, and medicine, are excluded. There are a number of seminaries for the Catholic priests, and numerous gymnasiums, lyceums, and high schools. Parochial schools are now established in each parish, if not in every village.

Government.] Bavaria was a sovereign monarchy, but the constitution of 26th May, 1818, recognized a national assembly, divided into two chambers. Every citizen of the State now enjoys perfect equality, in the eyes of the law, and nobody can be arrested or tried but by regular

legal proceedings. The press is freer than in any other German country; the censorship extending only to political journals. Servitude has been entirely abolished: and all classes are equally liable to military service. The person of the king is sacred; the crown is hereditary in the male line according to primogeniture; but if the male line, with all its agnates, should be extinguished, the crown may pass into the female line. The age of majority for the king is fixed at 18. The king reigns by right of birth, but swears at his accession to maintain the constitution, after which he receives the oath of allegiance from his subjects. The present king is of the Catholic faith, but he might be a Protestant, as no law opposes it. No member of the royal family can marry without the consent of the king. No general law can be introduced without the consent of the chambers; but the laws are sanctioned by the king alone. The chambers' consent must be obtained in the imposition of taxes; and without their consent no new ones can be imposed. The first chamber consists of the princes of the royal family, the first officers of the crown, the two archbishops, the higher nobility or hereditary senators, one bishop named by the king, the president of the Protestant consistory, and those persons whom the king may name either for life, or hereditary as members. The second chamber consists of deputies who are elected by the landed proprietors, the universities, the cities and boroughs, and the clergy. Every six years a new election takes place; but the ancient members can be elected again. The chambers are to be convocated at least once a year. Every citizen of the State may bring before the chamber complaints against infraction of the law. It is easy to perceive, however, that a constitution framed like this leaves far too great power in the hands of the king, though happily in the present moment it seems to have fallen into good hands. A new code of law is preparing, as great confusion has been felt on account of the different laws by which different provinces are regulated. The administration is directed by a council, consisting of the ministers of state, crown officers, and 12 or 16 members. The ministry is divided into 5 departments. The kingdom is divided into 8 circles, at the head of each stands a royal commissary, who is president of a council of administration. The police is not a peculiar department in Bavaria, but is exercised by the council of administration which reports to the minister of the home department. The revenue is stated by Balbi at 79,100,000 francs, or £3,295,833 sterling, in 1828; and the debt is stated to be 238,200,000 francs, or £9,925,000 sterling. At present the revenue is said to exceed the expenditure, and the surplus is appropriated to the liquidation of the debt. The sources of this revenue are the royal domains, the regalia to which belong the mines, the mint, the salt-pits, a tobacco monopoly, and some direct and indirect taxes. The constitution has placed the national debt under the guarantee of the States.

Army.] Bavaria has, next to Austria and Prussia, the most numerous army of all the German provinces. Its contingent to the army of the confederacy is to amount to 35,000 men. The active army consists of 46,341 men. The army is formed by conscription. Every Bavarian is obliged to bear arms for the defence of his country, the clergy alone excepted. Every citizen without distinction of class—the nobility excepted—is liable to active duty for five years. Besides the active army, there is a reserve, and a *landwehr* or militia. There is an excellent military and

artillery school at Munich. The two principal fortresses are Passau and Landau; the latter is at the same time a fortress of the German confederacy.

Topography] The 8 circles into which Bavaria is divided bear the names of the principal rivers.

1st. *The Iser Circle.*] The Iser circle has a superficial extent of about 6,730 British square miles, with a population of 521,000 souls. There are 15 towns, 41 boroughs, 3,227 villages, and about 8000 hamlets and isolated farms in the district; the latter are particularly found in the mountains. The majority of the inhabitants are Catholics; but there are also in and around Munich about 20,000 Protestants. The southern part of the circle is surrounded by the Noric Alps, and presents a rugged scene of mountains and valleys. The highest mountains of Bavaria are the Watzmann, 9,150 feet; the Mühlsteinhern 7000; and the Staufen, near Reichenhall, 5,408 feet in altitude, are situated here. The rest of the circle is flat; but has large forests and mosses. The principal river is the Iser, a rapid stream which runs through the middle of the circle; among its tributaries are the Loisach and the Amper. The second large river is the Inn, to which belong the Salza, the Manzfall, the Aicha, and the Saala. The Lech is a considerable river. The circle is rich in lakes, the most remarkable of which are the Chiemsee, the Ammersee, and the Tegernsee, which is 50 fathoms deep. There are also a good many mineral springs. In the plains agriculture is carried on; but there is a great extent of sterile mosses and moors. The great wealth of this district consists in its forests; the rearing of cattle is also carried on to some extent in the mountainous districts. The mines are valuable, particularly those of salt; there are also iron and coal.

City of Munich.] Munich, the capital of the kingdom and residence of the king, is situated on the Iser, on a plain 1,920 feet above the sea. It contains 3,163 houses, with 60,024 inhabitants. Although not quite regularly built, many of the streets are large, and part of the houses are very elegant. It is well-lighted, and has a number of beautiful public buildings, among which are the royal palace, the gallery of pictures, the glyptotheca—built by the present king, and the chef-d'œuvre of the architect Klenze—and a number of very fine churches, of which the church of our Lady, with 30 altars, and the celebrated monument of the emperor Louis, deserve particular notice. The new university established in this city has already attained considerable reputation, though the students are generally regarded as much more extravagant and romantic beings than the same class in Vienna, Berlin, or Leipsic. Munich will soon be in scientific and literary respects the centre of civilization for the south of Germany, as Berlin is for the north. The library contains 400,000 volumes, and 8,500 MSS. arranged in 54 saloons. The gallery of pictures in this city is one of the finest in Europe; and an immense number of paintings remain at Schleisheim, a royal castle in the neighbourhood. The theatre here is said to be excellent; and there are several beautiful public gardens open to every body, among which, that called the English garden is particularly fine. Munich is 285 miles by the road W. from Vienna, and 42 miles S.E. of Augsburg. N. Lat. 48° 55′, and 11° 30′ 9″ E. of Greenwich.—Landshut, on the Iser, contains 7,817 inhabitants. It is the seat of a university, and possesses a library of above 100,000 volumes.—At Berchtesgaden, a small town with 800 inhabitants, and in the surrounding country, a

great number of boxes and pretty toys of wood, bone, and ivory, sometimes of admirable workmanship, are manufactured.

2d. The Under or Lower Danube Circle.] This circle has a superficial extent of about 4,900 square miles, with a population of 355,546, who are almost all Catholics. It contains 12 towns, 46 boroughs, 2048 villages, and 7,028 hamlets and isolated farms. The country is on the whole mountainous; the highest chain, the Bohemian Forest, runs on the boundaries. In the valleys there is here and there very fertile land. The Danube runs from W. to E. through this circle; besides this river there are the Salzach, the Iser, the Ilz, and the Inn, &c. The climate on the south of the Danube is milder than on the north, where the neighbourhood of the mountains is often very cold. The air is, however, pure and healthy. Agriculture is here conducted more successfully than in the Iser circle, and so is the rearing of cattle; but the industry is small. Passau, the chief town, lies upon a peninsula formed by the junction of the Inn and the Danube; it is strongly fortified, and has 10,300 inhabitants. The advantageous situation of this place for commerce is turned to little use. The town—probably one of the most ancient in Bavaria—is particularly known for its romantic situation, and celebrated for the beauty of the women.—At Straubing, on the Danube, a town with 6,189 inhabitants, stood the *Castra Augustanea* of the Romans.

3d. The Regen Circle.] The surface and population of this circle is nearly equal to that of the Under Danube circle. The Catholics are here also superior in number to the Lutherans. There are 28 towns, 66 boroughs, 3,160 villages and hamlets, in the Regen circle. The N.E. side, which touches the Bohemian Forest, is very mountainous; on the S.W. of the Danube are fertile plains. The forests are very extensive. The Danube divides the circle into two unequal parts; to its basin belong the Schewenter, the Paar, the Ilm, the Sulz, and the Regen, which latter gives its name to this circle. Agriculture is most productive on the S. of the Danube, and from Donaustauff to Ingolstadt on the north of the river. There are no vines cultivated here, except a few vineyards on the Danube, which are of very limited extent. There are some very rich mines; but those only of coal and iron have been explored. On the whole, a much more active spirit of industry is predominant here than in the two former circles. Brewing is carried on to a considerable extent; and the beer made here is reckoned among the best in Germany.

City of Ratisbon.] This city stands on the north side of the Danube, at its confluence with the Regen. It was formerly an imperial city, and is very ancient, being the *Castra regina* and *Augusta Tiberia* of the Romans; it was also once the capital of Bavaria, and the ducal residence. It is still a large well-built city, in the form of a crescent, fortified with a double wall, ditches, and ramparts, and pleasantly situated in a fruitful country. It contains several elegant public buildings, and upwards of 26,000 inhabitants. Here the general Diet of the empire was wont to be held since 1662,—except in 1713, when it was transferred for some time on account of the plague, and in 1742, when it was held for a few years at Frankfort on the Mayne. Its usual place of sitting was in the council-house; but as the German empire no longer exists, it is deprived of that honour as well as of the title and privileges of an imperial city. In 1809 the Austrians were defeated in the neighbour-

hood of this city by the French, after a severe combat of five days. The territory in its vicinity formerly constituted a bishopric, but the bishop had no jurisdiction in the city. It enjoys a great trade by means of the Danube; and from this place, large quantities of grain, wood, and provisions, are shipped for Vienna. Over the Danube there is a stately stone bridge of 15 arches, 23 feet broad, and 1091 feet long; begun in 1135, and finished in 1156. The Papists have the cathedral and 28 other churches; but the Lutherans are most numerous, and held the government when Ratisbon was an imperial city. Ratisbon is 30 miles W. of Straubing, 82 miles N.W. of Passau, 124 miles N.W. of Lintz, 246 miles N.W. of Vienna, 72 miles N.E. of Augsburg, and nearly the same distance N.N.E. of Munich, and 370 miles S. of Hamburg. N. Lat. 49° 2′, and 12° 5′ E. of Greenwich.—At Ingolstadt on the Danube, with 4,820 inhabitants, in the church of our Lady, is the tomb of the well known Dr. Eck, who disputed with Luther.

4th. The Upper Mayne Circle.] The territorial surface of this circle is estimated at above 4000 square miles, and the population exceeds 500,000, being partly Catholics, and partly Lutherans, besides a few Calvinists, and about 2,200 Jews. This circle contains 37 towns, 72 boroughs, and 2,271 villages and hamlets. On the E. rise the Bohemian Mountains; on the N.W. a part of the Thuringian Mountains; and in the midst the Fichtelgebirge. The circle is almost throughout mountainous; but except the highest tops of the Fichtelgebirge, the mountains are of moderate height, and fertile. The principal river is the Mayne, of which the source is on the Fichtelgebirge. It receives the Radach and the Regnitz. Some other streams fall into the Danube and the Elbe. There are no lakes, but many mineral springs. The climate, at least in the S., is as warm and mild as in any other part of Germany. This whole circle is well-cultivated; all kinds of corn, vegetables, and fruit, are cultivated here; and of the latter a large quantity is sent to Saxony. The cultivation of the vine on the banks of the Mayne is not important. Wood is a considerable production; and the rearing of cattle is well attended to. Among the minerals, iron is the most important. There are also extensive coal-pits. There are more than 300 species of marble found here. Industry is more animated than in the other circles. A principal branch is the iron manufacture. The principal articles of exportation are fruit, flax, hemp, young fruit trees, wood, coal, iron, and ironware. The Mayne and the Regnitz are navigable, and the roads very good. The chief town is Baireuth, with 14,000 inhabitants. It lies in a pleasant country on the Mayne.—Bamberg, with 20,000 inhabitants, is one of the finest towns in the monarchy; it lies on the Regnitz, and has a magnificent castle, with 24 churches and 15 chapels. Gardening is a principal branch of industry, there being upwards of 400 gardeners here, who conduct a very animated commerce in seeds and graft-plants.

5th. The Rezat Circle.] This circle is rather of less extent than the preceding, and has a population of 446,604 inhabitants, being one of the most populous districts of the monarchy. It contains 42 towns, 55 boroughs, and 2004 villages and hamlets. The majority of the inhabitants are Lutherans. There are several ridges of hills running through this circle, but none of any considerable height; and none of the circles of Bavaria has so many and so fertile plains. There are also extensive forests. The Danube touches it on the south; the principal river is the Regnitz, which flows into the Mayne; among the smaller rivers are the

Rednitz, the Pegnitz, and the Wernitz. The climate is mild and healthy. No circle in the whole kingdom is better cultivated and more productive. Agriculture is very well carried on; the rearing of cattle is better conducted here than in any other part of Bavaria. In this circle are situated most of the manufacturing and the principal commercial towns. Anspach is the chief town. It is built on the Rezat, and contains 16,000 inhabitants.—Erlangen, a town of 12,000 inhabitants, contains the Protestant university of the kingdom, with a library of 30,000 volumes, a botanical garden, and several scientific societies.—The townhouse of Nuernberg, on the Pegnitz, and several churches, particularly that of St. Sebald, are remarkable for beautiful paintings. In the church of St. Clare is found the most ancient paintings upon glass. There is a well here 536 feet deep. It is the birthplace of the celebrated painter Albrecht Duerer, who is buried in the church of St. John. This city is chiefly celebrated by the corporation of the Meistersanger, of whom one of the most renowned, Hans Sachs, was a native of the town. Nuernberg is celebrated in the annals of invention. Martin Beheim, who drew the first useful globe, Erasmus Ebner who invented brass, and Peter Hele who invented watches, which were at first called Nuernbergian eggs, resided here. The population is said to exceed 32,000. Balbi states it at 40,000.

6th. The Upper Danube Circle.] The population of this circle is reckoned at 438,146. It contains 23 towns, 47 boroughs, and 1,778 villages and hamlets, and is nearly of the same extent as the circle of the Upper Mayne. The Arlberg, a branch of the Rhetian Alps, runs on its boundaries, and joins the Alps of Algau. The S. part of the circle is covered with mountains, which partly rise to the snow-line. In the northern part towards the Danube, there are beautiful plains and a fertile soil, but also large mosses. The principal river is the Danube; to which basin some other rivers, such as the Lech, the Wertach, the Iller, &c. run. A small part of the Lake of Constance belongs to this circle; the other lakes are but of small size. There are several mineral springs. The climate is much milder and more healthy in the northern plains along the Danube, than in the south, where it is in most parts an Alpine climate. No corn is reared in the south on account of the high mountains; but in the north, agriculture is successfully carried on in all its branches, and also the cultivation of vines. The rearing of cattle is the principal branch of industry in this circle.

City of Augsburg.] Augsburg, formerly an imperial city, is situated at the confluence of the Lech and Wertha, and contains 36,000 inhabitants, of whom about 17,000 are Catholics, the rest Protestants. It was founded by the Romans, in the reign of Augustus, in honour of whom it received the name of *Augusta Vindelicorum*, and is consequently one of the most ancient cities in Germany. It lies in a pleasant, fruitful, and healthy territory, and is one of the most handsome towns in southern Germany, somewhat resembling Antwerp. Most of the houses are built of clay and timber, but a fourth part of the town is built of freestone. The public buildings, as the cathedral, churches, town-house, conduits, &c. are in general stately and magnificent; but the glory of Augsburg is that part of it called the Fuggery, which consists of several stately streets and palaces built and possessed by the noble family of the Fuggers, who were formerly lords of a great part of the adjacent country. Augsburg was anciently a place of great trade, when Venice enjoyed the commerce

of India and the Levant, as the Eastern commodities were wont to be brought to Germany from Venice, by the way of Augsburg; and in the commencement of the emperor Charles V.'s reign, the Fuggers above mentioned, who were Augsburg merchants, several times supplied him with the loan of immense sums. But the trade of Augsburg declined with that of Venice; and the war of Thirty years annihilated the commerce of this city. Augsburg, however, is still a considerable city, abounding with skilful and industrious mechanics of the Lutheran persuasion.—Lindau is a town of nearly 3000 inhabitants, built on two islands in the Lake of Constance; a wall of 300 feet length unites it with the main land. To the harbour here belong 69 large, and 200 smaller vessels. In the neighbourhood a considerable quantity of wine is produced.

7th. *The Under Mayne Circle.*] This circle has a surface of 3,320 square miles, with a population of 440,452 souls, of whom the majority are Catholics; there is, however, a considerable number of Lutherans, and about 5,800 Jews. This circle contains 44 towns, 55 boroughs, and 1188 villages and hamlets. The greatest part of the country consists of mountains of moderate height and fertile valleys. In the N. are higher mountains belonging to the Rhöngebirge; on the E. is a part of the Steigerwald; and on the W. the Spessart. These mountains are covered with large forests. The principal river is the Mayne; next to which the Tauber, the Itz, the Kinzig, the Lohr, and the Fulda, are the most important. There are no lakes of any considerable size. The eastern part of the country is one of the most fertile districts of Germany; and even on the west, near the Spessart, there are some very rich districts. Gardening, and the cultivation of fruit, is carried on very extensively here; apples and cherries are grown in great quantity in the E., and prunes in the W.; and wine is a staple production in the vicinity of the Mayne. The wine of Wurzburg, called *Leisten* and *Steinwein*, is much valued. The rearing of cattle is also carried on very extensively. The Mayne is navigable. Wurzburg is the chief town of this circle; it lies on the Mayne, which divides it into two parts. It has about 20,000 inhabitants, and conducts a considerable commerce in wine. On a rock 400 feet above the town rises the fortress of Marienberg, where is an old castle, a church, and an arsenal, under which latter is an enormous wine-cellar.—Schweinfurt on the Mayne, with 5,114 inhabitants, conducts an extensive commerce in wine and fruit.

8th. *The Rhine Circle.*] The surface of this circle exceeds 3000 square miles. It contains 410,742 inhabitants, 28 towns, 16 boroughs, and 665 villages. The inhabitants are of German origin, and speak a very corrupt dialect, for which reason most of the more refined classes prefer to speak French, which in Landau, for instance, and in the neighbourhood, has almost superseded the German altogether. They are partly Catholics, partly Protestants. This circle consists entirely of mountains and valleys; on the S. spreads the Wasgau over the country, to which belongs the Donnersberg, an oval mountain with a conical summit rising 2,102 feet above the Rhine; none of the other chains equals this in height. Most of the mountains are covered with wood; the largest valley is that of the Rhine, which, between Spire and Frankenthal, opens into a small plain. The Rhine, which bounds the circle on its E. side, receives the Lauter and the Queich. The Blies, which waters the S.W. corner of the circle, falls into the Saar. The soil is on the whole very

productive; even the hills are fertile, and when properly cultivated produce all the necessaries of life. The principal productions are rye, which is grown more than wheat; flax, hemp, and vegetables; walnuts and chesnuts are very important productions. The best wine is grown on the borders of the Rhine. Manufactures are not carried on upon a large scale in this circle. Spire, or Speier, is the chief town of this circle. The population is about 6,400, chiefly Lutherans. In the cathedral eight emperors and three empresses are buried; but their marble monuments were destroyed so early as 1689.—Frankenthal, situated upon a canal by which it communicates with the Rhine, has about 800 inhabitants, and is the most industrious town in this circle. The principal manufacture is one of china, which rivals the best in Europe. Landau, with 4,240 inhabitants, on the Queich, is a fortress of the German confederacy; but belonging to Bavaria, is only occupied by Bavarians. The fortifications of Landau are considered as particularly strong. It sustained remarkable sieges in 1702, 1704, 1713, and 1793.

CHAP. X.—THE KINGDOM OF SAXONY.

The kingdom of Saxony was formed from the electorate of the same name. It was reduced by the congress of Vienna to about half its former size. It is bounded on the N. and N.E. by the kingdom of Prussia; on the S.E. and S. by the Austrian empire; on the S.W. by the kingdom of Bavaria; on the W. by the principality of Reuss and by Altenberg; and on the N.W. by Prussia. Stein reckons the population at 1,273,615, and the superficial extent at only 273 German, or 5,870 British square miles.

History.] The countries now forming the kingdom of Saxony and the possessions of the Saxon princes, were not originally inhabited by the ancient Saxons, who had their seats between the Elbe and Weser, from whence they spread to the Ems and the Rhine. They were in the time of Charlemagne divided into Westphalians, Eastphalians, and Augrivarians. Charlemagne, after a war of 33 years, subdued them, and forced them to embrace the Christian religion. But in later times Saxony had again dukes; Otto I., when he set out on his Italian expedition, named Hermann Billung governor of the Saxon provinces, and afterwards gave him some of them—as the present provinces of Lüneburg, and some districts on the other side of the Elbe—as a duchy. After Hermann's male descendants had been extinguished in 1106, the duchy came, after many contests, into the house of Ascania; and Bernhard of Ascania, at the end of the 12th century, had possession of the districts then called the duchy of Saxony. After this period the name of duchy of Saxony was extended to other German territories, and Wittemberg became the principal city of the new duchy. The inhabitants of the countries now belonging to the Saxon princes are mostly of the races of Hermundurians, Sorbes, or Wendes. The first were before the great migration established in Misnia, and Thuringia; their name is lost in history towards the end of the 4th century, and appears again in that of Thuringians. The mark Misnia had been established by the German king, Henry I., as a defence against the Slavonians; he placed Saxon colonists here, and built the town of Misnia, or Meissen. The Ascanian line became extinguished in 1423 with the death of the elector, Albert III., after a series

of conflicts and changes whose history would lead us too far from our present purpose. Frederic the Warlike succeeded the last prince of the Ascanian line in 1423. We are again obliged to pass over the reign of several electors till we come to the elector Frederic III. who succeeded his father Ernest,[49] and by his manly and prudent conduct at the election of the emperor Charles V. obtained the honourable appellation of 'the Wise.' He founded the university of Wittemberg, on the 18th October, 1502, where the professors Luther and Melancthon began the Reformation, in which, however, the elector took no other part than to protect Luther from his enemies. He was succeeded in 1525 by his brother John, who introduced the Protestant religion in all his dominions, and caused his chancellor to read the Confession of Faith of the Protestant States at the diet of Augsburg. John was succeeded in 1532 by his son, John Frederic, the last elector of the elder Ernestinian line, whose history we have related in our general historical article on Germany. This prince was succeeded by his brother August, whose laws became the basis of the Saxon constitution. This wise prince received and protected numbers of the Flemish Protestants, who were driven from the Netherlands by the tyranny of Alba, and who founded several manufactures in Saxony. His unfortunate interference with theological controversy caused the Crypto Calvinistic disputes, which cost the chancellor Craean his life under the torture in 1575. August was succeeded by Christian I. and Christian II. the latter of whom died in 1611, and was succeeded by his brother John George I., who obtained Lusatia from the emperor Ferdinand as a pledge for the expense of the war carried on against the elector palatine Frederic V. But after his death, the elector having concluded a peace with Austria on the 30th of May 1636, obtained Lusatia as a hereditary fief of the Bohemian crown. John George in 1656 divided his lands among his four sons. The eldest, John George II., succeeded him in the electorate, and was succeeded in his turn by John George III. in 1680; John George IV. succeeded in 1691, and his brother, Frederic Augustus, in 1694. The latter, after having embraced the Catholic religion, was elected king of Poland in 1697. The expenses of the new king, and his war with Charles XII. king of Sweden, threw the country into debt, and in the peace of Altranstädt, in 1706, Frederic Augustus was forced to resign the Polish crown. But Charles XII. having been defeated at Pultawa, he obtained it again in 1709, and maintained it till his death in 1733. His son, Frederic Augustus II. (as king of Poland Augustus III.) reigned from 1733 to 1763, and claimed some of the Austrian States after the death of the emperor Charles VI.; but after having made peace with Austria he assisted Maria Theresa against Frederic II. of Prussia. The circumstances and consequences of this alliance will be related in the history of Prussia. Saxony, which was treated like a conquered province, was only, in the peace of Hubertsburg, restored to the king, who had during the war resided at Warsaw. An enormous debt was incurred by this war. The king died the year of the peace, and his eldest son, Frederic Christian, reigned only a few months, and was succeeded by his son, Frederic Augustus, who, till 1768, stood under the guardianship of his uncle the prince Xavier.

[49] Ernest and Albert, the two sons of Frederic, surnamed 'the Mild,' founded the two lines of Saxon princes existing in the present monarchy, namely, the Ernestinian and the Albertinian. The Ernestinian was in the possession of the electorate, and the Albertinian of the other principalities in Saxony.

Under the wise and just government of the new elector the country began quickly to recover from all its miseries. The claims of his mother on the Bavarian succession led him to an alliance with Frederic II., and in the peace of Teschen he obtained 6,000,000 of florins for his claims. An alliance with Prussia against France was dissolved, almost as soon as concluded, by the battle of Jena, on the 14th of October 1806. In the peace of Posen the elector entered the Rhenish confederacy, for the army of which he agreed to furnish 20,000 men, assumed, at the direction of Napoleon, the royal title, and obtained the circle of Cottbus in compensation for some cessions to the kingdom of Westphalia. By the constitution of the 21st July 1807, the king was created hereditary duke of Warsaw. The adoption of the royal title produced no change in the constitution of Saxony, neither was the French law introduced into Saxony, as in other States of the Rhenish confederacy. After the battle of Leipsic, therefore, he remained a prisoner of the allies, and was 20 months separated from his country. At the congress of Vienna it was proposed to incorporate Saxony entirely with the Prussian States, for which the king was to be indemnified by some insignificant provinces on the Rhine. But the declarations of several European, and many German princes, the perseverance of the king himself, and the loud proclaimed discontent of his people, compelled the holy allies to renounce their design, and the king of Prussia was obliged to content himself with the half of the kingdom. The king signed this cession in the peace with Prussia at Vienna on the 15th May 1815, and was thereafter on the 7th of June allowed to return to his country. The reasons assigned for this partition, accord better with the character generally bestowed upon the spoilers of Poland, than with that regard to justice which the Congress at Vienna professed to be guided by. The king of Prussia, in a proclamation addressed to the people in that portion allotted to him, announcing their union to his crown, very coolly told them, "The general agreement of the powers assembled in congress has assigned me your country, subjected by the fate of war, by way of indemnity for the loss which has on one side diminished the circuit of the States guaranteed to me." The king of Saxony, on the other hand, in his farewell address, spoke in simple, touching, language, the anguish of a heart rudely torn from the objects of its tenderest affections; when the ties entwined with the kindliest feelings of youth, and rendered sacred by the recollection of all that is venerable in ancestry, and ennobling in the remembrance of their high deeds, are forcibly ruptured. It is impossible to read the following passage without sympathizing in his feelings: "All my efforts to avert so painful a sacrifice have been in vain. I must part from you! and the bonds which your fidelity and attachment to my person have rendered so dear to me,—the bonds which have formed for ages the happiness of my house and of your ancestors, must be broken!" Since that period, many useful reforms have been made in the administration; and the constitution, resting on the representation of the *Landstande* or States, has been preserved, on the whole, with some changes. The king died in 1827, and was succeeded by his brother. The young hereditary prince of Saxony is baptized by the name of "Frederic-Augustus-Albert-Anthony-Ferdinand-Joseph-Charles-Maria-Baptist-Nepomuck-William-Xavier-George-Fidelis!"

Physical Features.] Towards the frontiers of Bohemia, this country has a mountainous aspect, while in the northern parts it is plain and

level. Upper Lusatia is also hilly and mountainous. The chain of the Erzgebirge, or Metallic mountains, a branch of the Sudetes, runs in an oblique direction N.E. and S.W. along the whole frontier of Saxony, in a winding course, as far as the frontier of Upper Lusatia, where it meets the Riesengebirge, or Mountains of Giants. The comparative course of this chain is 130 British miles. The Riesengebirge divides Saxon Lusatia from Bohemia for the space of other forty miles, and is merely a continuation of the same range, under another appellation. The Erzgebirge declines rapidly towards the Bohemian side, but the descent on the Saxon side is very gradual and gentle. No other mountains occur in the Saxon dominions.

Rivers.] The Elbe—already described, and into which all the other streams, except the Neisse, fall—the Saale, Pleisse, the Weisse Elster, Schwarze Elster, Freyberg, Muldawa, and Partha, are the chief rivers. The Saale rises nine miles to the S.W. of Hof, in Culmsbach, from the foot of the Fichtelgebirge, and after running a comparative course of 130 British miles, falls into the Elbe, three miles to the south of Barby. The Weisse, or White Elster, rises at the foot of the Erzgebirge, in the south frontier of Voigtland; and running in a direction parallel to that of the Saale, after a comparative course of 110 British miles, falls into the Elbe, near Dessau. The Freyberg Muldawa rises in the same chain of mountains as the Weisse Elster; and running in the same direction, joins the latter stream, two miles below Colditz. The Saxon rivers form many beautiful valleys, which are celebrated for their charming scenery.

Soil and Produce.] The electorate of Saxony was accounted the most productive and fertile in agricultural produce, of all the countries of northern Germany. But as the most fertile tracts are now ceded to the Prussian monarchy, the above character must be restricted to such parts of the circles of Meissen and Leipsic, as still belong to the king of Saxony. The country between the cities of Meissen and Dresden may vie with the north of Italy in beauty and variety of agricultural produce; along the banks of the Elbe, from Meissen to Dresden, are many large vineyards; but the wine, though abundant in quantity, is not equal in quality to the Rhenish wine; some of the villages along the banks of the above stream, are built on rocks, rising perpendicularly from the river, and forming a scenery at once romantic and delightful. The mountains consist of granite, hornslate, gneiss, slate, and porphyry, with some basalt rocks of a conical form. The valleys on the right side of the Elbe are more fertile than those on the left.

Climate.] The climate is everywhere healthy, and the air perhaps milder than in any other country in the same latitude. The N. and E. winds are broken by the large forests, and the soil is genial in most districts.

Industry and Commerce.] In no German State, taken as a whole, is there such an amount of productive industry, in proportion to extent of population, to be found as in the kingdom of Saxony. Before the last unhappy division, it was counted that two-fifths of the inhabitants were supported by rural industry; and now, that the principal agricultural provinces have been taken away, it may be said that three-fifths are supported by manufactures. As the Saxons are an ingenious race, manufactures of almost every kind are carried on, as thread, linens, cottons, and printed shawls, calicoes, laces, ribbons, woollens, velvets, carpets, paper, cutlery, pottery, colours derived from various minerals, glass and

porcelian of remarkable beauty, and various works in serpentine stone. Beautiful pearls are found in the Elster, in shells of six inches long, which form a branch of Saxon industry and manufacture. The city of Leipsic is the centre of the book-trade of all Germany, and of the wool-trade of Saxony. Every sort of manufacture is carried on at Leipsic; and its three annual fairs are resorted to from every quarter of Germany, and by foreign merchants from different parts of the continent. By means of its numerous rivers, all falling into the Elbe, it enjoys a great commerce both inland and foreign. The population of the Erzgebirge is almost entirely supported by the mines and manufactures, as the barrenness of the soil is such, that it does not produce food sufficient for the inhabitants. The manufactures of salt have much declined, on account of the neighbourhood of Halle, where the salt is more abundant, finer, and cheaper.

Mines.] The mines constitute a principal part of the wealth of Saxony, as next to those of Hungary, they are the most productive in Europe, particularly in silver. The masses of native silver are sometimes of great magnitude.[50] The silver mines in the vicinity of Freyberg, were accidentally discovered in 1180. Those of Schneeberg were discovered in 1471, and the rest in succession. Since the discovery of the mines of Freyberg, they have been so much excavated, that the greatest part of the city is undermined and stands upon vaults and caverns. There is a mine—denominated on account of its superior produce 'the Prince of Heaven'—which usually produced, not very many years ago, so rich an ore, that 100 lb. weight afforded 130 marks of silver, or 65 lb. in the 100. But it is an observation among the miners, that where the veins are richest and purest, they are thinnest, and generally not above two inches broad. The ore as it generally runs, produces about an ounce and a half of pure silver in the pound; and they work it, though it does not contain half an ounce. Besides native silver, the mines produce common corneous silver, or horny silver; silver glance, or as it is technically denominated, sulphurated silver, in the various species of compact, earthy, and brittle silver glance; and light red, and white silver ore. The other metallic minerals are tin, bismuth, manganese, cobalt, wolframe, copper, lead, iron, nickel. The tin of Saxony is not only a rare species of that metal, but also of superior value. The annual product of the silver mines is thought to be rivalled by that of the cobalt, converted into blue pigment. The tin, copper, lead, and iron, are all very productive. One of the silver mines in the vicinity of Freyberg is 200 fathoms, or 1,200 feet deep.[51] At Zwickaw is found the noted *terra miraculosa;* and at Schneckenstein, near Averback, in Voigtland, appears the topaz rock, unique in its kind. Jet is also produced, and abundance

[50] Thus we are told, that in 1750, a mass of native silver, weighing upwards of 125 lbs. was dug out of the great vein called Himmelsfurst, near Freyberg. We are also informed by Albini, in his Chronicles of the Meissnischerberg, that at Schneeberg, in the year 1478, a rich silver vein was discovered, and so large a block of native silver and ore cut out, that duke Albert of Saxony descended into the mine, and used this large block, which smelted 400 centners, or 44,000 lbs. of silver, as a table to dine on. These mines were discovered posterior to those of the Harz.

[51] The miners are very superstitious, and pretend to discover silver mines by what they term *a divining rod.* The discoverer takes a forked piece of hazel, holds the two horns in his hand, with the forks upright, and traverses the ground, muttering a form of unintelligible words; and when the forked stick turns in his hand, (which they ascribe to an occult impulse,) and points to the ground, he takes it for an infallible sign of a rich silver mine in the place pointed at; upon which they fall a digging, and seldom fail of success.

of kaolin, or fine porcelian-clay, with fullers-earth, marble, slate, serpentine, agates, jasper, and black chalcedony; but when Busching, and other geographers, add diamonds, jacinths, rubies, and sapphires, they speak in the plenitude of their ignorance, and only mean, as usual, limpid and coloured chrystals. Coal is in abundance. Yet though Saxony abounds in mines, it has no mineral waters, the hot baths of Wolkenstein excepted.

Inhabitants.] The population has been given in the act of the German confederacy at 1,200,000 inhabitants. M. Balbi states it at 1,400,000 in 1826. The majority consists of Germans, speaking the High German dialect. In Lusatia, and Meissen on the right banks of the Elbe, there are still some descendants of the Wendes who have preserved their own language and manners. There are not above 1200 Jews in Saxony, and they are tolerated only in Dresden and Leipzig. The Lutheran is the established church, although the king himself is Catholic, and by the peace of Posen, the Catholic religion was placed on a footing of equality with the Lutheran. However, the number of all the Catholics certainly does not exceed 40,000; there are about 1,600 Moravians, and about 200 of the reformed religion.

Literature.] Literature and science have for a long time stood on a high scale in Saxony. There are several gymnasiums, and other schools and academies; among the latter, the mineralogic academy of Freyberg, instituted in 1765, is the most distinguished school of that science perhaps in Europe. This academy purchased the celebrated Werner's invaluable collection of minerals. The only university in the kingdom, since the late cession of the duchy of Saxony, is that of Leipzig, founded in 1409. It has six colleges, 24 professors, and an excellent library. There are also two celebrated German societies at Leipzig; one for the cultivation of the German tongue, and another for the liberal arts. A literary Journal was commenced in 1685, by Menkenius, at Leipzig, entitled *Acta Eruditorum*, or 'the Acts of the Learned,' which was patronized and supported by the great Leibnitz. It was the first literary journal in Europe, in point of time; and was followed by similar literary journals and reviews, in France, Holland, and England. The schools though much improved are not yet quite on a level with the spirit of the times.

Government.] Saxony is a constitutional monarchy, and holds the 4th place in the German confederacy, with 4 votes *in plenum*. The crown is hereditary in the Albertinian male line; if this should be extinguished in its male descendants, it will go to the Ernestinian line to begin with the house of Weimar. The king is of age at 18. He holds the executive power; appoints to all places; has the right of granting pardon in judgments; and the whole military power. In legislation and taxation the States have a voice; but as the ancient constitution has been preserved, these States are composed of most heterogeneous elements, and form an amalgamation of corporations of which each commonly represents itself. Thus, the nobility and the burgesses represent merely their own casts, and the peasant who has no representative bears the burden almost alone. The distinction of ranks is strongly delineated in Saxony: the inhabitants are divided into nobility, high and low, scholars—under which name all people who have a liberal profession, such as ministers, advocates, and physicians, are included—burghers, and peasants. Justice is administered by different tribunals. The police stands under the ministry.

Revenue.] The revenue amounted in 1826 to 28,000,000 francs, or £1,151,668; it is mainly derived from the domaine, regalia, and taxes. There is no report made of the expenditure. The debt amounted in 1826 to about 70,000,000 of francs, or £3,303,336, of which the interest is regularly paid; and the credit of the government is good.

Army.] The army is fixed at 10,000 men, including the *gens d'arms*, or armed police. There is a kind of conscription; but from it the privileged classes are exempted.

Topography.] Saxony is divided into 5 provinces called circles. There are in the kingdom 137 towns, 27 boroughs, and 3,384 villages.

1*st. The Circle of Meissen or Misnia.*] This circle takes its name from the ancient Margraviate of Meissen of which it is a part. Its inhabitants are partly Germans, and partly Wendes; the latter are located only on the right banks of the Elbe. There are about 1050 Jews. The religion of the majority is Lutheran. On the south the circle is bounded by the Sudetes, and is very mountainous. On both sides of the Elbe, for a distance of about nine miles, run the high sandstone mountains of Schandau, of which the narrow and romantic valleys are known under the name of Saxon Switzerland. The highest points of this ridge are on the boundaries of Bohemia. The Elbe is the principal river; besides it there are the Black Elster, the Mueglitz, and the Weisseritz. Near Meissen the vine grows at large, and near Zinnwald oats can scarcely be produced. Agriculture is in excellent state, and produces all kinds of corn, potatoes, flax, hemp, tobacco, and madder. Gardening is carried on with great care, and excellent fruit grown in large quantities. Wine is grown on the hills on the right side of the Elbe; some of the wines are thought good, but there is no exportation. Meissen is not one of the manufacturing districts, however there is much industry here, and commerce is very animated. The administration stands under the authorities of administration and justice in Dresden. The circle is divided into 12 bailiwicks, at the head of which stands a nobleman, with the title of *Kreishauptmann* or bailiff.

City of Dresden.] The capital of this kingdom is situated on both sides of the Elbe, and at its confluence with the Weisseritz. It is the seat of the principal tribunals of the country, and is divided into three towns: namely, New Dresden, or Neustadt; old Dresden, or Altstadt; and five suburbs. Old Dresden is on the left bank of the Elbe, and owes its origin to a chateau built by Charlemagne, in 808. Here are extensive barracks, the menagerie, and a porcelain manufacture. New Dresden stands on the opposite, or right bank of the Elbe, over which is one of the finest stone-bridges in Europe, consisting of 16 arches, and 1420 feet in length. New Dresden was built in 1020, and became a town in 1216. Here the king of Saxony resides in an ancient chateau, the apartments of which are magnificent. Besides a number of palaces, this quarter contains an opera house, an arsenal, a foundery, three Lutheran, and one beautiful Roman Catholic church. All the houses of Dresden are built of square freestone, and are almost all of the same height. Upon the whole, the numerous palaces and public buildings, beautiful in their architecture and magnificently furnished, which this city contains, united to its general appearance, have justly acquired it the character of one of the finest cities, if not the Florence, of Germany. As Dresden, built on both sides of the river, commands the passage of the Elbe, it is a place of great military importance, and is therefore strongly fortified;

but it is commanded on every side by hills.[58] The fine gallery at Dresden, filled with pictures and paintings of inestimable value, amongst which are portraits of all the successive electors of Saxony dressed in their electoral robes, is certainly one of the finest in Europe. It now contains 1,184 paintings. There is an academy of arts, and one of painting, sculpture, and drawing, two lyceums, a great many other establishments for education, a poetical society founded by Gottsched, and a Bible society. The royal library contains 250,000 volumes, 4000 manuscripts, 100,000 dissertations, and 20,000 maps, with a collection of about 180,000 prints. There are three other public libraries, a German theatre, an Italian opera, and a very excellent orchestra. The city lies 380 feet above the level of the sea. The statements of the population are various and contradictory, some rating it at 110,000, some at 90,000; and finally, others at 50,000, as Stein, Pinkerton, and Playfair; Balbi states it at 70,000 in 1826. Whatever the number of inhabitants may have been, it must have suffered a great diminution from the effects of war, famine, and pestilence. Dresden lies in Long. 31° 29′ E. of Ferro. Lat. 51° N. Sixty-two British miles by the road, S.E. of Leipzig: 62 miles N. of Prague, and 262 E. of Cologne. Meissen, in a romantic country, on the Elbe, over which leads a bridge, contains 4,071 inhabitants. It possesses several manufactures, among which that of china is celebrated over all Europe as one of the first if not the first in excellence. It is established in the Albrechtsberg, an ancient castle on a high syenite rock 80 feet above the Elbe, and employs 510 persons.—Plauen, a village on the Weisperitz, at the entrance of the valley of Plauen, is celebrated for its beauty. On a rock, near the town of Pirna, is the castle of Sonnestein, formerly fortified, but now used as an asylum for lunatics. Above the town of Königstein, on the Elbe, rises upon an almost vertical rock—the fort of Königstein, now the only fortress of Saxony. The fortifications enclose a corn-field, meadows, and wood; and are supplied with water by a well 900 feet deep. The cellars are hewn in the rock, and contain some enormous wine-casks; the arsenal and casernes are also cut in the living stone, so that the fort cannot be taken by bombardment.

2d. *The Circle of Leipzig.*] The inhabitants of this circle are German, and mostly Lutherans. The principal rivers are the two Muldas, the White Elster, with the Flossgraben, and the Pleisse. The climate is temperate and healthy. Agriculture is carried on with great skill, and corn, vegetables, and fruit, are reared in sufficient quantity for exportation.

[58] The fate of this fine city during the successive wars with Prussia and the campaign of 1813, was very unfortunate. In 1756, it was taken by the Great Frederic, who kept possession of it till 1759. In 1758, when the Austrians under marshal Daun, made an attempt on the suburbs, Schmettau, who commanded the Prussian garrison, set fire to the suburbs, which were greatly superior in size to the city within the walls, and inhabited by the most wealthy of the citizens. After its capture, in 1759, Frederic vainly attempted to retake it, and the city suffered a severe bombardment. But its miseries then, were nothing in comparison with those which it endured in 1813. Napoleon made every effort to strengthen its fortifications, and render it an impregnable position in his line of defence. It suffered several severe bombardments from the allies; and, after a long blockade, the French garrison capitulated on the 10th November, 1813. The distress of the citizens during this siege was augmented by a vast confluence of fugitives, who, driven from their smoking habitations, had taken refuge in Dresden. Hundreds of them died weekly; and their putrid remains thrown out on dunghills and other places, met the eye in every direction. Most of the beautiful walks in the vicinity, were completely destroyed; and whole woods felled for palisades. In 1814, a large magazine of gunpowder suddenly exploded, the shock of which was felt as far as Pirna,—a distance of 12 miles. In this explosion, great part of the city was blown up, and several hundreds lost their lives.

Cattle and sheep are also reared in considerable quantity. The seat of the administration is in the town of Leipzig.

City of Leipzig.] This is a well-built, literary, and commercial city, 8,954 paces in circuit, with large suburbs; containing an exchange, stadt-house, town-library, and a once celebrated university, now eclipsed by that of Halle, where living is cheaper. All sorts of manufactures are carried on at Leipzig, as gold, silver, silk, woollen, and linen yarn. It is one of the principal trading towns in Germany, inasmuch as it not only enjoys an extensive foreign trade, but also at its three celebrated fairs, kept at Easter, Michaelmas, and the beginning of the new year, which are frequented by above 2000 merchants,[53] carries on a very extensive commerce in domestic and foreign wares. The annual commercial transactions have been calculated at £3,000,000 sterling, exclusive of the book trade. The value of the books sold and exchanged is at least £200,000 annually. About 300 foreign booksellers attend the book fair. Between the suburbs and the town is a fine walk of lime-trees, which was laid out in 1702, and encompasses the city. The suburbs themselves are large and handsome, and beautified with gardens. Mulberry-trees are also planted in the town-ditches; but the fortifications seem rather calculated for the use of the inhabitants to walk on, than for defence. The streets are clean, commodious, and agreeable. The houses are lofty, especially about the great square, where they are from seven to nine stories high. Lutheranism being the established religion, the Lutherans are in possession of the parish churches, eight in number. The Calvinists have one church, and the Roman Catholics another, in the castle of Pleissenburg, which defends the town. The university library contains 30,000 volumes. Here is also a library belonging to the city, which contains 36,000 volumes, and 2000 manuscripts. The plain on which Leipzig is situated, is of great

[53] "Till the middle of the 16th century, publishers, in the proper sense of the word, were unknown. John Otto, born at Nürnberg in 1510, is said to be the earliest on record who made bargains for copy-right without being himself a printer. Some years afterwards, two regular dealers in the same department settled in Leipzig, where the university, already in high fame, had produced a demand for books from the moment the art of printing wandered up from the Rhine. Before the end of the century, the book-fair was established. It prospered so rapidly, that in 1660 the Easter catalogue—which has been annually continued ever since—was printed for the first time. It now presents every year, in a thick 8vo. volume, a collection of new books and new editions to which there is no parallel in Europe. The writing public is out of all proportion too large for the reading public of Germany. At the fair all the brethren of the trade flock together in Leipzig, not only from every part of Germany, but from every European country where German books are sold, to settle accounts and examine the harvest of the year. The number always amounts to several hundreds; and they have built an exchange for themselves. Yet a German publisher has less chance of making great profits, and a German author has fewer prospects of turning his manuscript to good account than the same classes of persons in any other country that know the value of intellectual labour. There is a pest called *nachdrueckerei*, or reprinting, which gnaws on the vitals of the poor author, and paralyzes the most enterprising publisher. Each State of the confederation has its own law of copy-right; and an author is secured against piracy only in the State where he prints. But he writes for all; for they all speak the same language. If the book be worth any thing, it is immediately reprinted in some neighbouring State; and as the reprinter pays nothing for copy-right, he can obviously afford to undersell the original publisher. All the States do not deserve to be equally involved in this censure. Prussia, I believe, has shown herself liberal in protecting every German publisher. The unpleasing exterior of ordinary German printing, the coarse watery paper, and worn-out types, must be referred in some measure to the same cause. The publisher, or the author who publishes on his own account, naturally risks as little capital as possible in the hazardous speculation. Besides, it is his interest to diminish the temptation to reprint, by making his own edition as cheap as may be. The system has shown its effects, too, in keeping up the frequency of publication by subscription, even among authors of the most settled and popular reputation."—*Russel's Tour.*

extent, and well-watered by the Pleisse, the Elster, and Partha, with canals cut from these streams, intersecting and irrigating it in various directions. The meadows, especially on their banks, are large and rich, being mowed thrice a year. Leipzig is the birth-place of several distinguished men, of whom we mention here only Leibnitz, Thomasius, and Kästner. Leipsic—or Leipzig, as it is properly written—properly signifies a grove of linden-trees, from the word *liepo*, a linden tree. It was supposed to contain 40,000 inhabitants, and by some, only 33,000, before the destructive campaign of 1813. Balbi states it to have contained 40,000 inhabitants in 1826.[54] Leipzig lies 114 British miles, by the road, S.W. of Berlin; 62 miles W.N.W. of Dresden, and 46 miles S.W. of Wittenberg. Lon. 12° 27′ E. of Greenwich. Lat. 51° 19′ N. Hubertsberg, a royal castle, is remarkable for the peace concluded here in 1763.—Grimma, with 3,300 inhabitants, contains a royal college, with a library of 4000 volumes. There are four manufactories of tobacco pipes here; in which 132,000 long, and 18,000 short pipes are annually made.

3d. Circle of the Erzegebirge.] This circle is a part of the margraviate of Meissen. Its population has been estimated at 460,000 persons, chiefly of German descent. It contains 59 towns, 11 boroughs, and 704 villages, and the Lutheran creed is everywhere predominant. This circle is throughout mountainous, forming the declivity of the chain of which it bears the name. The highest tops are the Fichtelberg, the Pöhlberg, the Geiersberg, the Griefenstein, and the Katzenstein. The principal rivers are the two Muldawas, the Pleisse, and the Pöhle. The climate is very rigorous in the mountains, and the inhabitants can seldom dispense with fires; but the air is pure and healthy. Agriculture is well conducted on the declivities of the mountains. However, rye and oats prosper better than wheat and barley; and the circle does not nearly produce corn sufficient for its consumption. Wood abounds in this circle; but the consumption is so enormous on account of the many smelting furnaces, that the extent of forests is rapidly diminishing. Besides the manufactures occasioned by the mining, there are many others conducted in the mountains, such as that of linen, worsted, cotton cloth, ribbons, and lace, which is one of the principal employments of the women as well as embroidery. The commerce of this circle is important The great manufacturers go with their merchandise to the German fairs; but as there is no navigable river, the expense of transportation is considerable, the inhabitants of the Erzgeberge are not wealthy, and they earn their livelihood with much trouble, but they are satisfied and content with their situation. The circle is governed in the same manner as the others, but the miners have their own jurisdiction and administration.—Freiberg is the principal town of this circle. It lies 1,179 feet above the sea; and is situated on a branch of the Muldawa, near the mountains which separate Saxony from Bohemia. It contains 2000 houses, a royal palace, a hand-

[54] Leipzig has frequently suffered all the horrors of war. During the 30 years' war, five times was it taken and retaken in the short space of two years; and here the celebrated Gustavus defeated the veteran Tilly, in 1631, and shook the fabric of Austrian power. Two other victories were obtained here, by the Swedes, over the Austrians, in 1641 and 1642. In the commencement of the 18th century, Leipzig submitted to the victorious arms of Charles XII.; during the war of seven years, it was garrisoned by the Prussians, who laid it under severe contributions, and kept it till the peace of Hubertsberg. But if the plains of Leipzig were rendered memorable by the victory of the Great Gustavus, when the cause of religious liberty reared its drooping head, they have been rendered still more famous for the grand and decisive struggle which effected the deliverance of Europe from the thraldom of France.

some market-place, several elegant public buildings, and 12,000 inhabitants. The environs are hilly, but tolerably fertile. Here, in the church of St. Peter, is the sepulchre of the Saxon sovereigns; the monument of the elector Maurice is one of the noblest in Germany.—Tharant, on the Weisseritz, contains 800 inhabitants, and possesses some mineral springs and silver mines. Above the town lies the celebrated old castle of Tharant, or Tharand, now in ruins.—Chemnitz is situated 915 feet above the sea, in a pleasant plain on the Chemnitz and Gablenz, with 16,000 inhabitants. It is one of the most industrious towns in the kingdom, and contains very extensive manufactures in cotton, which annually produce above 50,000 pairs of stockings, and 184,000 pieces of cotton and woollen cloth, and silk handkerchiefs.—Annaberg, a mining town, is situated 2,823 feet above the sea, and contains 4,500 inhabitants.—Zweikau, on the Muldawa, has a population of 4,100, and possesses a gymnasium, with a library of 16,000 volumes.

4th. Circle of Voigtland.] This is a small circle, containing 14 towns, 1 borough, and 301 villages. The majority of the inhabitants are Lutherans. In its physical features, the Voigtland very much resembles the Erzgebirge. It lies on the declivity of the Sudetes, and has, consequently, on the south very high mountains. The highest points are the Schneekenstein and the Bammelsberg, on the Bohemian boundaries. The principal rivers are the White Elster, the Schneeberg, Muldawa, or Mulda, and the Gölyzch. The climate varies on account of the mountains and valleys. In the mountainous parts of the Voigtland, nothing but oats and potatoes are grown. In the flatter parts agriculture is conducted with great care. The rearing of cattle is important. Butter is an article of exportation; and the sheep are of excellent breed. A principal article of industry in the Voigtland is the manufacture of all kinds of muslin, in which between 20,000 and 30,000 hands, or about one-third of the whole population, are employed.—Plauen is the principal town. It is situated in a beautiful valley on the Elster, and contains 7000 inhabitants, with a lyceum.—Adorf and Neukischen, possess extensive manufactories of musical instruments.—Klingenthal with 1,100 inhabitants, annually furnishes 8000 violins, 150 violincellos, and several thousand harps and guitars.

5th. The Circle of Lusatia.] This circle is a part of the former margraviate of Lusatia, which, as an originally Wendish province, was not even reckoned as belonging to the German empire. About one-fifth of the population, or 34,000 individuals, are Wendes, speaking their own language, which is so little different from the other Slavonian dialects, that they understand the Russians and Poles quite well. The inhabitants are partly Lutheran, partly Catholic. There are also several sects, of which that of Herrnhut, which took its origin in Lusatia, is the most remarkable.[55] The Wendes are much behind the German part of the

[55] They are denominated *Herrnhutters* from a Lusatian village founded in 1722 by some Moravian brethren, who settled there on lands formerly belonging to count Zinzendorf; and which afterwards became the chief settlement and nursery of the *Unitas Fratrum*, as the Moravians style themselves. In the year 1750, a royal mandate was addressed to the count of Gersdorff, superintendent of Bauzen, declaring that the fraternal community of Herrnhutters, or Moravians, should be indulged and protected as faithful subjects. By the purchase too, and the possession of several noble estates, as Herrnhut, Bethelsdorf, Hennersdorff, Niesky, and Trabus, they have not only obtained civil power, but also the patronage of several Lutheran churches. It is from this Herrnhut that so many Moravian missions to different quarters of the Pagan world have proceeded. A detailed and perspicuous account of

inhabitants in information and civilization. There are 11 towns, 5 boroughs, 468 villages in this circle. Along the southern boundaries runs a ridge called the Wahlisch chain. In this mountain have all rivers of this province their sources. The principal are the Black Elster, the Spree, and the Neisse. The southern and larger part of the country is fertile, and much better cultivated than the N.W. edge. The climate is mildest round Bauzen and Zittau, but rigorous in the mountains. Lusatia has always had the reputation of being one of the most industrious provinces of Germany. The spinning of flax and wool is conducted on a very extensive scale, and so are the cotton manufactures; but the most important are those of linen, and beautiful table linen. The administration is different from that of the rest of the kingdom, this province having retained part of its ancient constitution.—Bauzen, or Bautzen, or Budissen, the capital of Lusatia, is situated on the Spree, 680 feet above the level of the sea. It contains 11,500 inhabitants, of whom one-eighth are Catholics.—Zittau, containing 8000 inhabitants, is prettily surrounded with gardens.—Herrnhut stands at the foot of the Huth mountain, but at 1054 feet above the level of the sea.—Bethelsdorf, a borough, with 1,500 inhabitants, is the seat of the assembly of the elders of the community of the Moravians, which exercises a supreme inspection over all the members of the sect wherever dispersed through the world.

CHAP. XI.—THE KINGDOM OF HANOVER.

This State, formerly a duchy, then an electorate, and raised to the rank of a kingdom in 1815, is composed of various portions of territory, and is very irregular in its form. Hanover returned its population to the confederation at 1,305,351 persons. Hassel states it to amount to 1,314,124; Stein has stated it to be 1,463,700; and Balbi states it to have been 1,520,000 in 1826.[56] Its superficial extent of territory is about 695 German square miles, or nearly 14,940 British square miles.

Boundaries.] Hanover lies in the northern half of Germany, and is bounded on the N. by the German Ocean, the duchy of Oldenburg, the bailiwick of Ritzebuttel and the mouth of the Elbe; on the N.E. by the Elbe, which divides it from Holstein, Lauenburg, and Mecklenburg, though some districts lie on the right bank of the Elbe; on the E. by the Prussian province of Saxony, and by the duchy of Brunswick; on the S. by Prussian Saxony, the electorate of Hessen, Lippe, and Prussian Westphalia; and on the W. by the Netherlands.

History.] In the earliest epochs of European history, the countries between the Elbe and Weser were inhabited by numerous small tribes of hunters and herdsmen, who cherished freedom and independence. Among these the Cherusci were spread around the Harz, and into Westphalia; the Chanzes were located at the mouth of the Weser and

the Moravian principles, was published by Augustus Gottlieb Spangenburg, which completely refutes the calumnies advanced against the pious fraternity by bishop Warburton, and retailed by Mosheim's learned translator, Dr. Maclaine. Herrnhut contains 1200 inhabitants.

[56] From a statement of births and burials published for 1819, it would appear that the population must be on the increase; the births, being males, 26,569—females, 25,033—total, 51,602. The deaths were, males, 18,990—females, 19,320—total, 38,310; the births thus exceeding the deaths by 13,292.

Jahde ; the Frisi in Hildesheim; and the Longobards on both sides of the Elbe. In the 4th century these tribes vanish in history, or appear united with the Saxons. After the Saxons had been subdued by Charlemagne, he placed at the head of each *gau*, a *graf* or count, whose authority was not hereditary. Otto the great, about A. D. 940, conferred the duchy of Saxony on Herrmann Billing, a Luneburg noble, in whose family it remained till 1106. The several branches of the house of Brunswick—now reduced to two, namely, Brunswick-Luneburg and Zelle, and the branch of Brunswick-Wolfenbuttle—derive their descent from the margrave Azo d'Est, who possessed the Milanese, Genoa, and part of Lombardy. Azo coming into Germany with the emperor Conrad II. in the year 1030, and marrying the daughter and heiress of Guelph or Welph, a Bavarian nobleman, succeeded him in his domains. To his son, Welph the Fat, the emperor Henry IV. gave the investiture of Bavaria, from which Otto, duke of Saxony, was driven for rebellion. Welph, who had married the marchioness of Tuscany, dying without issue, his Italian States and Bavarian possessions fell to his brother, Henry the Black, who obtained the county of Luneburg with his wife Wulfilde, daughter of Magnus, duke of Saxony. His son, Henry the Proud, having married the daughter of the emperor Lotharius received from his father-in-law, the duchy and investiture of Saxony, and the hereditary lands of Brunswick, Nordheim, and Supplingenburg; and the dominions of the family reached from the Rhine to the Vistula, when his son Henry reduced the Slavi on the coast of the Baltic. Henry, surnamed the Lion, made a pilgrimage to the East, as one of the crusaders, and brought away a very rich treasure of relics, gold and silver plate, and gems, collected during that expedition. In 1179, Henry was put under the ban of the empire by Frederic Barbarossa, or the Red Beard, and deprived of all his dominions in Italy and Suabia, with the duchies of Saxony and Bavaria. He was allowed, however, to retain Luneburg, some lordships, and his Slavonian conquests; but his descendants were stript of a considerable portion of these territories. His son Otto obtained the imperial dignity in 1209, and was crowned by Innocent III. Otto erected Luneburg and Brunswick into a duchy, in favour of his youngest brother William; and his second brother, Henry, was count palatine of the Rhine. Frederic, successor of Otto, confirmed William in the possession of Luneburg and Brunswick. From William descended duke Magnus II., the common ancestor of the lines of Brunswick-Luneburg, and the first line of Brunswick-Wolfenbuttle; his son Bernard being the founder of the former,—and Henry of the latter, which became extinct in 1634. Ernest, duke of Brunswick-Luneburg, the descendant of Bernard, dying in 1546, left four sons, of whom the two eldest left no heirs. His third son, Henry, was the founder of the second line of Brunswick-Wolfenbuttle; and his fourth son, William, continued that of Luneburg and Zelle. The Protestant religion was introduced by duke Ernest, in 1531, into his dominions; and his grand nephew, Ernest Augustus, established the right of primogeniture in the Wilhelmine line, or that of Luneburg-Zell. George William, grandson of William, founder of the Wilhelmine line, succeeded his brother, Christian Lewis, in the duchies of Hanover and Zelle, and the counties of Hoya and Diepholz. By the failure of the first line of Wolfenbuttle, he obtained the principality of Calenberg. In 1675, he commanded an army sent to attack Treves, and relieve Monticuculi, who was opposed to Turenne and D'Asfelde, near-

Strasburg; and effected his purpose by a decisive victory over marshal Crequi, at Consarbruck, which was followed by the reduction of Treves. He died in 1705, aged 81 years. Ernest Augustus, youngest brother of George William, married the princess Sophia, fifth daughter of Frederic V. the unfortunate elector palatine and king of Bohemia, and grand-daughter of James I. of England, and VI. of Scotland. He commanded on the Rhine, under his brother George William, and supplied the emperor with a body of troops, to aid him against the Turks and revolted Hungarians. In return for these services, and to secure his friendship for the future, Leopold created a ninth electorate in his favour, in 1692. This creation met with great opposition in the electoral college and the college of princes; but at last, by a *conclusum* of the three colleges, on the 30th of January, 1708, it was unanimously determined that the electoral dignity should be confirmed to the house of Hanover, in the male line; and Ernest Augustus's son, George, was introduced into the electoral college, on the 12th of September, 1707. As George William, duke of Luneburg-Zell, had no male issue, and his only daughter was married to George, his brother Ernest's son, he settled his whole dominions upon Ernest and his posterity, in order to enable him to support the electoral dignity. Ernest died in 1698, and was succeeded by his son George Lewis. By virtue of an act of the British legislature, by which the crown was settled on his mother, the electress Sophia and her heirs, being Protestants, he was called to the succession on the death of queen Anne, in August, 1714. From this period, the history of Hanover becomes connected with that of Great Britain. In 1716, the duchies of Bremen and Verden being conquered by Denmark from Sweden, were sold to George I. for 700,000 rixdollars, or £130,000 sterling, and have ever since formed part of the Hanoverian dominions. George II., who succeeded his father in 1727, founded the university of Gottingen in 1738, and enlarged the Hanoverian territory by the acquisition of Hadeln and Bentheim. In the war of 1755, Hanover was invaded by an army of 110,000 French; and the duke of Cumberland being defeated at the battle of Hastenbeck, was necessitated to conclude a convention at Closterseven, under the mediation of his Danish majesty, by which 37,000 men were obliged to lay down their arms and return to their homes. But the French, who were then commanded by the duke de Richelieu, abused their conquest, by subjecting the whole country to pillage; and their commander—an old profligate courtier, and a parasite of Madam Pompadour of infamous memory—resolved not to lose the opportunity of repairing his finances with the plunder of the electorate. The poor Hanoverians plundered of their all, their villages and fields laid waste, and their country rendered a dreary and smoking wilderness, were so enraged, that they took up arms, and, under the command of prince Ferdinand of Brunswick, broke the disgraceful convention, and drove the French out of their country, and across the Rhine. In this campaign the French lost 60,000 men,—a great number of whom were the victims of their own excesses. But the French court having re-enforced their army next year, prince Ferdinand—whose army did not amount to one-third of the French force—was compelled to re-cross the Rhine; and during the rest of the war, Hanover was miserably ravaged, as the allied army was never able to undertake offensive operations, or face the invading armies in the field. George II., during the Seven years' war, was succeeded, in 1760, by his grandson, George III., who, on the 30th

September 1763, issued a very oppressive law—happily now abolished by the constitution of Hanover—by which every individual was forbidden to address himself immediately to the king either with petitions or complaints; a regulation which of course placed the Hanoverian ministers in a very comfortable situation. Several exchanges of territory were made with Brunswick-Wolfenbuttel; and in 1802 the electorate of Hanover obtained the principality of Osnabruck for the cession of Hildesheim barony, and some other districts. In the war which broke out between England and France, the latter refused to acknowledge the neutrality of the German States of the king of England, and on the 3d of January 1803, Hanover was occupied by French troops. In the third coalition the Russians and Swedes occupied Hanover on the retreat of the French, and the Hanoverian legion entered the Weser; but the battle of Austerlitz changed the face of affairs. In 1806, Hanover was occupied by the Prussians, according to a treaty with France; and in the same year, the war between France and Prussia broke out, and the French again occupied Hanover. By the treaty of Tilsit, a part of Hanover, namely, Grubenhagen and Osnabruck, Gottingen, and a part of Hohenstein, was joined to the kingdom of Westphalia, whilst the rest remained under French administration, and was afterwards incorporated into the French empire. This state of things had lasted not quite three years, when the battle of Leipzig restored Hanover to England; under the title of a kingdom, it obtained an augmentation of territory in the congress of Vienna, and made on the other hand some cessions. Count Munster, in his opening speech to the assembled States-general, informed them that the prince-regent would hold sacred the original rights of the States, but several modifications would be necessary in the exercise of these rights. In particular, the finances would require an uniform and firm administration. With respect to the debts contracted during the French occupation, though his royal highness could not allow the right of States to bind their posterity, by debts contracted under a foreign usurpation, and without the consent of their sovereign, yet he thought it advisable that they should be recognised under certain modifications. The people pleased with these promises, returned cheerfully to an allegiance which they had never willingly renounced.

Physical Features.] With the exception of the lower part of the principality of Kalenberg, and of the principalities of Hildesheim, Göttingen, and Grubenhagen, the provinces of Hanover extend in an immense plain, only here and there interrupted by sand-hills, and presenting many sterile heaths and moors. This tract of land, stretching across the north of Germany, and forming the boundaries of the Netherlands to the mouth of the Vistula, and beyond the former Hercynia, seems to have been longer covered by the waters of the sea than the rest of Germany. The sandy soil is interspersed with blocks of granite, and where not under culture, presents little more than barren heaths, and a few melancholy looking firs. Along the rivers, however, where there is an alluvial deposit, the soil is fertile; it is also very rich on the shores of the German Ocean.

Mountains.] The only mountains are those of the Harz, in the detached domain of Grubenhagen. This chain extends from the bailiwick of Langelsheim, in Wolfenbuttle, in a S.E. direction, as far as Harzgerode, in Anhalt, a direct distance of 40 miles, and from S.W. to N.E. more than 48. This ridge is covered with forests of oak, beech, aspen, alder, birch, fir, and pine. This abundance of timber, though in itself of

great importance, is yet still more valuable on account of the mines, as without it the mines and forges could not be wrought. These mountains are composed of granite, primitive limestone, green stone, horn rock, quartz, primitive flinty slate, primitive clay slate, transition limestone, greywacke, clay slate, whet slate, alum slate, transition flinty slate, transition trap, transition porphyry, and different varieties of floetz rocks. The S.W. part of the range is of a calcareous or basaltic nature, and consists of large pyramidal blocks, which furnish excellent stones for mending the roads and paving the streets. The Brocken, or Blocksberg, the highest point of the Harz, does not fall within this kingdom, but more than three-fifths of the whole chain—in the course of which occur several very elevated summits, such as the Bruchberg, rising to the height of 3018, and the Wormberg 2,880 feet above the level of the Baltic—belongs to Hanover.

Rivers and Lakes.] The principal rivers are, the Elbe, the Weser, the Leine, the Aller, and the Ilmenau. The Elbe now forms the eastern and north-east boundary of Hanover; the Weser and Leine run on the west, and the Aller and Ilmenau, in the centre of the kingdom. The Ems is another Hanoverian stream, since the acquisition of East Friesland and Osnabruck. Hanover is generally a marshy country, and intersected by a great number of small and unimportant streams falling into the above-mentioned rivers. The chief lakes are those of Diepholz and Steinhuder. That of Diepholz is called the Dummer-see, and though very extensive, is extremely shallow. Only one side of it, however, belongs to Hanover. The Steinhudersmeer occupies about 16 square miles. Besides these, the Dollast, which is more properly a bay of the German Ocean, through which the Ems flows, presents an inland sheet of water, occupying about 50 square miles. It was formed in 1277-8 by the bursting-in of the sea, when more than 50 villages were destroyed. In East Friesland, there is a subterranean lake, of which the surface is so thickly overgrown that waggons can pass over it. The mineral springs of Rehburg, Linsiuer, and Nordheim, are most celebrated.

Climate.] The climate is by no means agreeable, and the temperature is very variable. The winters are very rigorous, and frosty days often intervene between the greatest heats of summer. A N.W. wind commonly blows during the cold season; an E. wind in spring; and a S.W. wind in summer. The common diseases are catarrhs, intermittent and nervous fevers, consumptions, apoplexies, and palsies. When July is very warm, dysenteries are peculiarly malignant. The epidemics are of a rheumatic nature, and consumptions are very fatal.

Soil and Produce.] As Hanover abounds in heaths and marshes, and as very little progress has been made in clearing the former and draining the latter, the quantity of arable and fertile land is not great; yet by a judicious management, a great part of the soil might be brought under cultivation. Nearly one-half of the land is covered with weeds; a fifth part of the arable land is occupied in pasturage: and of the parts from which grain is raised, a third is taken up in beans and pease; a fourth, with wheat, rye, and buck-wheat; a fifth, with barley; and a sixth, with oats. On the sandy lands, good potatoes are produced in abundance. The greatest part of Hildesheim consists of good land proper for tillage, and producing various kinds of grain, hops, flax, and leguminous vegetables. The southern parts of Hildesheim, bordering on the Harz, are hilly; and, like it, are covered with woods. In Osnabruck half the land

consist of heaths, fit only for pasturage and raising turf. The best part of it lies about Quackenbruck, and is called Artland. Osnabruck produces as much rye as supplies the consumption of its inhabitants, and above 500 small stills. But almost all the barley used here, is imported from the adjacent country of Minden and Schaumburg. In East Friesland, the springs and harvests are late. The land is here flat, low, and defended by strong and lofty dykes against the fury of the waves; but along the coasts it is rich and fertile, consisting chiefly of meadow-land. Fowl and game are plentiful in this quarter, particularly geese, which are of an uncommon size, some of them weighing 24 lbs. each. Boars and deers are much less numerous in Hanover than formerly, and during the last century wolves have become extremely rare. Roebucks and hares are numerous. The rivers do not produce a great variety of fish; but the markets are well-supplied with turbot, perch, carp, pike, and large eels. The streams issuing from the Harz and other wooded mountains, abound with small trout of excellent flavour. Though the grain raised in Hanover is not sufficient for its internal consumption, and though the pasturage is not luxuriant, yet a good number of horses are exported from this country to Saxony, France, and Italy. The heaths of Luneburg are covered with sheep of a small breed, with long wool, which is used in Belgium in the manufacture of coarse cloth, and is wrought by the Hanoverians into a tolerably good-looking cloth. Several rams of the Merino breed have, however, been imported from Upper Saxony, and thus the wool has been considerably ameliorated. The cows are neither large nor beautiful: they are generally of a black and white, or a white and fawn colour. The oxen are of a middle size, and yield excellent beef. The rearing of bees on the heaths of Luneburg yields considerable quantities of wax and honey. In East Friesland, owing to the abundance of meadow-land, the cattle are excellent, and of extraordinary size. In Osnabruck, where the land is poor, the industrious peasantry find it difficult to earn a comfortable subsistence, and hence about 6000 of them go annually to Holland, where they get employment in rural occupations.

Minerals and Metals.] Hanover abounds in mineral products. They consist of gold, silver, copper, lead, iron, cobalt, zinc, with marble, slate, limestone, and coal. Coal is also found in Osnabruck. Salt is found in Hildesheim, but not in sufficient quantity to supply the internal consumpt. Salt springs rise within the walls of Luneburg, and yield a principal branch of the Hanoverian revenue, and the main wealth of that city. Of these salt-works, a fifth belongs to the sovereign. Formerly 120,000 tons of salt were annually boiled; but since the commencement of the last century, these salt-works have greatly declined. There is also a large and extensive salt-work at Harzburg. In the principality of Grubenhagen lies the Harz,—so denominated, because of the great quantity of pitch and rosin produced from the trees. The mines of the Harz produce native silver, antimonial silver ore, arsenical silver ore, silver glance, light red, and dark red, silver ore, copper, lead, zinc, cobalt, and iron. Two curious mineral substances, boracite, and staurolite, are also found here. The whole produce of the Harz mines is 1,172,733 rixdollars, or £205,228 : 5 : 3*d.*; of which, to the value of 2,880 rixdollars, or £445 : 13 : 2*d.* is gold, coined into ducats; and 802,860 rixdollars, or £140,000 : 10*s.* is silver. The product of the lead mine of Caroline is 194,000 rixdollars, or £33,950 sterling. The clear profit of

all the Harz mines, after deducting all charges, is estimated at 453,000 rixdollars, or £79,858 : 8 : 4*d.* sterling.[57] The other minerals produced in the Harz are manganese, calamine, blue, green, and white vitriol, sulphur, yellow ochre, limestone, earthy mineral, and shaggy mineral pitch, or bitumen. The gold and silver of the several mine works, are purchased of the personal proprietors or overseers at a certain rate. The other products are taken at a stipulated price by the mine-office at Hanover, which returns tallow, leather, and other necessaries for the works, at a stipulated rate. The inhabitants of the Harz pay neither license nor contribution-money; the only taxes being those in the towns, where the owner of every house is assessed one rixdollar, and a small excise is exacted on beer imported.

Commerce and Manufactures.] Hanover is far from being a commercial country. But there are four fairs annually held at Hanover, and two at Osnabruck, where the commodities which have been purchased at the fairs of Brunswick, Leipzig, and Frankfort, are exposed to sale. These consist chiefly of earthen wares, agricultural and mechanical implements, pins, needles, coarse linen drapery, baskets, coarse stuffs, lace, thread, toys, and ribbons. Articles of British merchandise are brought from Hamburg, Embden, Bremen, and Brunswick; the linens of Friesland and Silesia, and the cloths, silks, and jewels of France, are also met with in Hanover. A great deal of plain and table-linen is manufactured at Hanover. At Osnabruck, the most common employment is spinning flax, which is afterwards wrought into a damask, greatly inferior to that of Prussia and Friesland. The exportation of yarn and the coarse linens denominated *Osnabrucks*, annually amount to 1,000,000 rixdollars, or £175,000 sterling. Very little hemp is raised in Hanover. Their domestic linens are made principally of flax, which is never spun sufficiently fine to be manufactured into lawns and cambrics. Silver plate, gold and silver lace, jewellery, embroidery, and saddlery, are made at Hanover. Diamonds are cut in a very superior manner; and the artists also cut white, yellow, or red amber, which is retailed by the Jews at an enormous profit. The principal exports are horses, black cattle, wax, lead, linens, leather, salt, oats, barley, thread, the iron and copper of the Harz, the turf of Bremen, and timber.

Inhabitants.] The inhabitants of Hanover are Germans of those tribes which formed the Saxon league. They may be divided into two principal tribes: namely, *Saxons*, properly so called, the descendants of the Cherusci, Frises, and Longobards, who live between the Elbe and Ems; and *Frieses*, who live in that quarter of the kingdom which now forms the present East Friesland. Mixed with these two tribes are some colonists on the Harz, and a few Wendes in Luneburg; Jews are scattered throughout all the provinces. German is spoken everywhere; and in Hanover and the neighbourhood the dialect is very elegant and pure.

Religion.] The established system of religious belief and instruction

[57] The mines of the Harz are the oldest in Germany, or even in the north of Europe. They were accidentally discovered in 968 by a hunter, named Ramme, whose horse's hoof struck up a piece of silver ore. No sooner was this discovery made known, than the region was ordered to be explored by the emperor Otto. In that same year, mines were opened; and a company of Franks who understood the art of refining minerals, were engaged for that purpose, from whom the town of Frankenburg near the Rammelsberg, received its name. The first mines were those of the Rammelsberg, a high mountain near the imperial city of Goslar, and which derived its name from the hunter above mentioned. The mines of Wildman were discovered in 1045; and those of Zellerfeld, which are the chief, in 1070.

is Lutheranism. The number of Lutherans exceeds 1,000,000. All the parishes in the kingdom are under the care of seven superintendents, appointed by the supreme consistory, which consists of some of the most enlightened citizens. Before the union of Osnabruck with Hanover, the Jews were the most numerous sect next to the Lutherans. The Calvinists are but comparatively few in number. They make one-half of the population of East Friesland, where also are a number of Moravians. The members of the Reformed church amount to about 90,000; and the Catholics exceed 160,000. The Lutheran clergy are supported by a portion of the property which once belonged to the Roman Catholic church; but the greatest part of it is appropriated for the university of Gottingen, the lyceum of Hefeld, and other public institutions. The ministers of the other sects receive a small sum from government, and derive the rest of their subsistence from their respective flocks. A Bible society, under the patronage of the Hanoverian regency, has been established, and auxiliary societies are organizing throughout the kingdom.

State of Education and Literature.] Very great and laudable attention has been paid by the regency of Hanover to public instruction. In the middle, or secondary schools, are taught geography, history, and drawing, the French and English languages, and the elements of geometry. In gymnasiums, or schools of the third order—of which there are 27—are taught antiquities, and the Latin, Greek, and other languages. Besides these academies, there are establishments at Hanover and Luneburg for the education of the young nobility of both sexes, from the period of eight to fifteen years of age. An establishment of this nature, entitled the Georgianum, was founded at Hanover, in May, 1796, for the education of 40 pupils, the sons of Hanoverian nobles, who are all boarded, clothed, and taught, at the expense of the establishment. The pupils belonging to this institution may either enter the army or pursue their education at the university of Gottingen, in order to fit themselves for any other profession. Primary schools are established in every village; while schools for the classics, and the elements of the sciences, are founded in all the towns.

University of Gottingen.] The only university in the Hanoverian dominions is at Gottingen, in the S.W. quarter of Calenberg. It was founded by George II. in 1734. By the indefatigable diligence and attention of its first curator, baron Muenchausen, it has acquired a very distinguished reputation, and has now 36 ordinary professors, whose salaries average about £200, and are the highest in Germany, excepting, perhaps, that of one or two classes at Berlin. The library, to which every year considerable additions are made, is one of the best in Europe. It is called the Bulowean, having received its origin from a collection of more than 10,000 volumes bequeathed by baron Bulow for the public use. In the number of printed books, it far excels the Imperial library at Vienna, especially as to foreign and modern productions. A royal academy of sciences, founded in 1751, and a royal German society, also form part of the university. It has likewise a fine observatory, erected on a tower on the rampart; with a botanic garden, an anatomical hall, and a school for teaching midwifery. The celebrated ecclesiastical historian, Mosheim,—Michaelis, the learned commentator on Lowth, and eminent orientalist,—Haller, the famous physiologist,—Gessner, the natural historian,—the classical Heyne, and Tobias Mayer, the distinguished astronomer, were all ornaments of this seat of science and

literature. The original annual expense of this establishment was about 15,000 rixdollars, or £2,500; it now amounts to six times that sum. The number of students has been regularly on the increase since the end of the war. More than one-half of the whole number are foreigners, that is, are not natives of the kingdom of Hanover. The number of foreigners from States not German is naturally small in comparison with those who belong to other German States. In 1821, says Mr. Russel, out of nearly 700 students, who were not natives of the kingdom, not 100 were from countries foreign to Germany. Swiss and Greeks were the most numerous; then Russians and Englishmen. While there were upwards of one hundred young men from Prussia, notwithstanding the well-earned reputation of Berlin, there was only one solitary subject of Austria. The proportion of lawyers among the students is extravagantly large. The reason of this is, that from the mode of internal arrangement common to all the German States, there is an immense number of small public offices connected with the administration of justice, to which, trifling as the competence they afford may be, numbers of young men look forward as their destination. The lowest sum sufficient to carry a young man respectably through at Gottingen is 300 rixdollars—not quite £50—yearly.[58]

Constitution.] Since 1814 Hanover has been a sovereign kingdom, and holds the 5th place in the German confederacy, with 4 votes *in plenum*. The king is also king of Great Britain; but in theory this connexion is to have no influence in Hanover, and the interests of both countries being kept quite apart, an Englishman does not enjoy by birth the rights of a Hanoverian; nor is Hanover to be necessarily implicated in any war carried on by Great Britain. The crown is hereditary in the house of Brunswick-Luneburg in the male line; and the king is of age at 18. The former constitution, resting on a representation of the States, was re-established when the French left the country. By a royal ordonnance, of the 7th of December, 1819, the new organization of the general assembly, divided into two chambers, to be convened annually, was promulgated; and on the 12th of October, 1822, a royal edict directed the formation of the new administration. By a royal decree of 1818, the Catholics and other religious bodies were completely relieved from political disabilities, and they now enjoy as full eligibility to every office as the Lutherans. At the head of the administration stands a governor-general—at this moment the duke of Cambridge—and under him the ministry, which is divided into 7 departments.

Revenue.] The revenues of the kingdom are principally derived from a tax on land, from a contribution on the peasantry in money, grain, and labour on the roads, from a poll-tax on the different classes of

[58] There are 3 theological, 7 juridical, 8 medical, and 18 philosophical professors, in the Gottingen university. The confusion arising from the extraordinary number of professors in a German university is much increased by that peculiarity of its constitution which allows a professor to give lectures on any topic he pleases. "Every professor," says Mr. Russel, "may interfere, if he chooses, with the province of his colleagues. The professor of natural history must lecture on natural history, but he may likewise teach Greek; the professor of Latin must teach Latin, but, if he chooses, he may lecture on mathematics. Thus it just becomes a practical question who is held to be the more able instructor; and if the mathematical prelections of a professor of Greek, be reckoned better than those of the person regularly appointed to teach the science, the latter must be content to lose his scholars and his fees. It is the *faculty*, not the science, to which a man is appointed, that bounds his flight. This is the theory of the thing, and on this are founded the complaints that in the German universities the principle of competition has been carried preposterously far."

citizens, and from duties on salt, coals, turf, cattle, and the consumption of luxuries. Taxes are also levied on mills, leases, horses, and public carriages; and considerable sums are obtained from tithes, from the customs, the forests, fisheries, game-laws, the mines of the Harz, the coinage of money, and the postage of letters. The amount was formerly estimated at £962,500 sterling, but considering the necessity the Hanoverians were under of making great exertions in order to rid themselves of their French oppressors, and the reasons assigned by the regency for an increased taxation, the revenue must have considerably increased. Balbi states it to have amounted, in 1826, to 26,000,000 francs, or £1,083,333 : 6 : 8*d.*; the national debt amounted at the same time to about 64 millions of francs, or £2,708,333 : 6 : 8*d.*

Military Force.] There are nine garrison towns in Hanover. The fortifications of Stade were demolished in 1781; but those erected at Klutberg, above the Weser, in 1760, and called Fort George, have become very strong by the addition of new works. The following is the military force at its full complement: namely, infantry, 12,015; cavalry, 4,600; artillery, 671; corps of engineers, 95; militia, 5,500; total, 22,881. The number, however, in actual service in 1826, did not, according to Mons. Balbi, much exceed 13,000 men. The soldiers are all natives. The cavalry is generally composed of the sons of farmers; and the militia consists of pensioners, who have served 20 years in the army. The operations of the commander-in-chief are subordinate to the regency. Every soldier has a right to demand his discharge after 20 years' service, and is entitled to a pension according to his rank. The number of invalids amounts to 7000. No British subjects are employed in the Hanoverian army. The cannon foundery is at Hanover, situated on the glacis of the city. The only manufacture of small-arms is at Herzberg, which enjoys much reputation through Germany.

Topography.] The kingdom of Hanover is divided into 11 provinces, containing 73 towns, 121 boroughs, 960 large villages, and 4,135 hamlets.

1*st. The Principality of Kalenberg.*] This principality takes its name from an old castle situated within its limits. Its surface is about 1,070 British square miles, with a population of 139,222 souls, chiefly Lutherans. The country is mountainous in the south, but intersected with large valleys; the north belongs to the sandy plains of Germany. The Leine is the principal river, which begins to be navigable near Hanover. A part of the Steinhudermeer belongs to this province. Gardening is well carried on in the neighbourhood of Hanover, where it has been greatly improved by the gratuitous distribution of young fruit trees from the royal garden at Herrenhausen. The administration is conducted in the towns by town-councils, and in the country by bailiwicks.

City of Hanover.] This city is situated in a sandy plain, on both sides of the river Leine, by which it is divided into two towns: namely, the Alstadt and Newstadt, or the old and the new town. The old town lies on the left bank of the stream, which forms two branches here, enclosing an island; when they again re-unite, the stream becomes navigable. This city had no existence before the year 1163, and its original name was *Lawenrode;* but about the time of Henry the Lion, duke of Saxony, it received the appellation of *Hanover*, as it was at that time a ferry over the Leine, the term signifying *have over.* Hanover is built in

the form of a semicircle, or half-moon, and has several very handsome streets. The buildings are generally of brick and timber, in alternate layers; and in their appearance resemble the galleries of a vessel of the 16th century; the time of their erection is always marked upon them. In those dated 1565, each story projects over the one below it, and exhibits confused delineations of medallions, pagan deities, warriors, and verses of the psalms. The electoral palace, which, after being destroyed by fire, was rebuilt in 1741, is a very elegant structure of hewn stone. This palace is the seat of the regency. The newly erected part of the electoral church, and the palace of the princess of Wales, are also excellent structures of hewn stone. Hanover contains a theatre, 3 parish churches, a poor house, and 3 hospitals. The public library of the city is a very respectable building, containing about 24,000 volumes. This library was founded by Leibnitz, who bequeathed to it his own large and excellent collection of books. There are two portraits of this great man in the library, one at the age of 40, and the other at 60; and the arm-chair in which he expired, is here carefully preserved. His remains are interred under a stone in the Lutheran church in the new city. A very fine monument was also erected to his memory by private subscription. At Hanover, there is a society of natural history, a seminary for schoolmasters, and a school of female industry, where excellent pieces of embroidery are executed, which bring very high prices. There are some manufactures on a small scale, such as gold and silver lace, the printing of cotton and linen, the preparation of chichory for coffee, and brewing. The retail shops, and the warehouses of cloths and French silks, are well-supplied; English cloths and cottons are largely retailed. The environs of Hanover are very beautiful. The irregular assemblage of religious edifices, plain and handsome palaces, Gothic buildings, small wooden houses, churches painted of various colours, and arbours of poplar and lime-trees, have a very singular effect when seen from the suburbs.—Herrenhausen, a country-seat of the king, is in the vicinity of the city; the approach to it is by a long avenue of lime-trees, but this castle is far from being a handsome structure, and the grounds are laid out with the greatest uniformity. The water-works are good, and thought by some to excel those of the far-famed Versailles. The garden is extremely interesting to botanists, and is said to be surpassed only by that of Schœnbrunn. The population which was long stated to be about 15,000, in 1811 was found to be 21,000, and in 1826 nearly 28,200. East Long. from Greenwich, 9° 42′ 55″. N. Lat. 52° 22′ 25″. Distance by the road from Hamburg, 85 British miles S.W.; and 193 miles road-distance, W. of Berlin.—Hameln, on the Weser, is a town of 5,054 inhabitants; it was formerly a fortress, but the fortifications are no longer tenable.

2d. The Principality of Göttingen.] The surface of this province exceeds 500 square miles; and the population is estimated at 97,000. The country is covered with mountains and hills, of which the former are distinguished by their singular conical form. The mountains belong to the lower ridges of the Harz, and are not of any considerable height. The Weser is here formed at Münden by the confluence of the Werra and Fulda. This province is well-cultivated, and produces more corn than is sufficient for the home-consumption. Some smelting furnaces supply the principal branches of industry. The administration is the

same as that of the other provinces, and stands under a court of justice at Göttingen.

City of Göttingen.] Göttingen, the capital of the province, is built in a large fertile valley on the Leine, surrounded with gardens, and contains 1035 houses, with 9,600 inhabitants, of whom 8000 are Lutherans, and 338 Catholics; the rest are Calvinists and Jews. What distinguishes Göttingen particularly, is its excellent university, already described. The library, one of the largest, most complete, and useful in Europe, contains about 300,000 volumes, and 5000 manuscripts. Nordheim, on the Ruhme, contains 3,900 inhabitants, who are chiefly supported by the cultivation of tobacco, of which plant upwards of 90 acres are grown.—Münden, on the confluence of the Fulda and Werra, in a charming situation, has about 5000 inhabitants. It possesses some manufactures, and conducts an animated commerce on the three navigable rivers.

3d. The Principality of Grubenhagen.] The territorial extent of this province is about 530 square miles, with 81,000 inhabitants, among whom are 18,608 Catholics. About seven-twelfths of this district are covered with wood. The town of Eimbeck, belonging to this province, has 4,995 inhabitants.—Osterode, with 4,188 inhabitants, contains a large granary, from which 16,000 malters of corn—a measure which contains about 12 bushels—are annually distributed among the miners of the Harz.

4th. The Principality of Luneburg.] The surface of this province is estimated at 4,420 square miles, with a population of 252,457, chiefly Lutherans. This district is an enormous plain of sand, only here and there interrupted by tracts of wood or peat-moors. The climate is temperate and healthy, but the sky is seldom clear; there is a great deal of fog in summer, and the heat is, on the sandy plains without a tree, insufferable. The small kind of sheep called *heidschnucken*, are kept on the heath. The forests produce timber and fuel in great quantity, and a variety of berries which are gathered for exportation, particularly bilberries, which are sent to Hamburg and Bremen for the fabrication of wine. Luneburg, on the Ilmenau, which is here navigable, contains upwards of 12,000 inhabitants. There is an ancient castle here; and near the town rises the Balkberg—an isolated limestone rock, 118 feet in height, with remains of ancient fortifications, and some limestone quarries, in which boracite has been found.—Celle, or Zelle, on the Aller, has a population of nearly 9000 souls. Here is a royal castle and garden, with the monument of the unfortunate queen Matilda of Denmark.

5th. The County of Hoya and Deipholz.] The surface of this county is about 1,440 square miles, with 104,970 inhabitants. This province is an entire plain, uninterrupted by a single hill. Except the Duemmersee there is no lake, but many ponds, and a number of bogs. Agriculture and the rearing of cattle, are the principal branches of industry. Nienburg, on the Weser, is the principal town. It has a population of 3,810 souls.—Haga, on the Weser, with 1682 inhabitants, possesses some extensive bleachfields.—Diepholz, on the Hunte, possesses 2,068 inhabitants.

6th. The Province of Bremen.] The archbishopric of Bremen—which takes its name from the Hanseatic town—and the bishopric of Verden,

were secularized in the Westphalian peace, and given to Sweden. The Danes conquered both these provinces in 1712, and sold them to the elector of Brunswick-Luneburg, who afterwards purchased the consent of the Swedes, and obtained investiture from the emperor. The district of Hadeln came to the electorate, in 1731, by inheritance, and these 3 districts now form the province of Bremen, which has a surface of about 2,070 square miles. In its circuit lie the bailiwick of Ritzebuttel belonging to Hamburg, the district of Wuhrden belonging to Oldenburg, and the free town of Bremen. The population amounts to 191,060, mostly Lutherans. There is a German saying which compares Bremen to a shabby mantle with a gold lace border; and there is considerable truth in it, for the edge of the district running along the sea, and on the banks of the river, consists of a very rich soil, while the inner land is one immense heath, interspersed with enormous blocks of granite, and a few isolated patches of wood. Agriculture is productive on the whole, notwithstanding the bad soil of a great part of the country; and the rearing of cattle and horses is still more so.—Stade, in the district of Bremen, on the Schwinge, has a population of 4,770 souls.—Verden, on the Aller, has 4,200 inhabitants.

7th. The Province of Osnabruck.] The archbishopric of Osnabruck came, in 1803, as an hereditary property to Hanover, which, since the peace of Westphalia, had enjoyed the right of naming alternately to the bishopric. Its surface is about 1800 square miles, and population 188,655 souls, partly of Frisian race. The majority are Catholics; among the 68,800 Protestants are a considerable number of Calvinists around Lingen. Commerce is very animated in some places; and there is a considerable transit. The chief town is Osnabruck, on the Hase, with 10,000 or 11,000 inhabitants. It is the seat of a Catholic bishop and a Lutheran consistory, and is the most important commercial town of the province. Papenburg, a borough with nearly 4000 inhabitants, is built upon several navigable canals which communicate with the Ems. The inhabitants conduct a considerable trade in their own vessels.

8th. The Province of Hildesheim.] The extent of this province is about 650 square miles, with 121,816 inhabitants, the majority of whom are Lutherans. This is the most populous province of the kingdom. Agriculture is the principal branch of productive industry. The chief town is Hildesheim, on the Innerste, with 13,000 inhabitants in 1826, of whom about two-thirds are Lutherans. It is the seat of a Catholic bishop. In the cathedral are some fine pictures. Large cattle-markets are held here. Goslar, on the Gose, at the foot of the Rammelsberge, is a very ancient town, with 5,670 inhabitants.

9th. The Province of East Friesland.] This principality fell, in the midst of the 18th century, to Prussia, by right of inheritance, and was ceded to Hanover in 1815. Its extent is above 1,100 square miles, with 127,502 inhabitants, almost all of whom are of Frisish origin, and exhibit many peculiarities in manners and customs. Their language is German, intermixed with Frisian and Dutch words. There are not above 3000 Catholics; the rest are Lutherans, Calvinists, and Jews. Extensive dykes protect the flat coast against the inroads of the sea. Two bays enter the country on the west: namely, the Dollart and the Leisand. The situation of the province is favourable to commerce by sea; and this is more animated than that with the interior of Germany. The most numerous and wealthy class in East Friesland is that of the

peasants. This province has retained its old rights and prerogatives; and the States have more privileges than in the other provinces. The administration, therefore, differs considerably from that of the other provinces.—Aurich, with 2,660 inhabitants, is the chief town and seat of the government.—Emden, on the mouth of the Ems, has 10,985 inhabitants, and conducts a very animated commerce. Nearly 300 ships belong to this town, which conducts an extensive herring-fishery, producing annually from 12,000 to 13,000 barrels of fish.

10*th. The Province of Bentheim.*] This province has its own prince; but it is pledged to Hanover, which pays him an annuity. It is about 400 square miles in extent, and contains 24,364 inhabitants, who are partly Calvinists. Though the inhabitants are of German origin, they exhibit Dutch manners, and the Dutch language is spoken in some parts. Agriculture is well carried on, and so is the rearing of cattle. There are no manufactures of any importance. This province has an administration of its own at Bentheim, a borough with 1,328 inhabitants.

11*th. The Province of Hohnstein.*] The surface of this little district is about 70 square miles, with 6,686 inhabitants, all Lutherans. This province lies in and upon the Harz, and is consequently very mountainous; but there is also on the S. a fine fertile valley called the Golden Vale. The administration has its seat at Ilefeld, a borough on the Bähre, which, with one of the most extensive higher schools in the N. of Germany, contains 540 inhabitants. In the neighbourhood of Appenrode there is a remarkable cave called the Kelle.

CHAP. XII.—THE KINGDOM OF WIRTEMBERG.

THE kingdom of Wirtemberg, or Würtemberg, has its name from an ancient castle, situated on a mountain not far from Unterturkheim, and from the ancient proprietors of which the present dynasty dates its origin. This kingdom has the sixth place in the German Confederacy, with 4 votes *in plenum*. It lies in the S.W. part of Germany, and is bounded on the N.E., E., and S.E., by Bavaria; on the S. for a small distance by the Lake of Constance; and on the S.W., W., N.W., and N. by Baden. Its superficial extent is, according to Rösch, given at 348 German square miles; others say 358; and a very recent calculation fixes it at 362.15 German, or 7,860 British square miles. The census of 1817 gives the population at 1,397,451; but the annual increase is not below 10,000. Balbi says the population was 1,520,000 in 1826.

History.] The first notice in history of the lords of Wirtemberg is in the 11th century, and in 1139 we find counts of Wurtumberg, or rather Wirtemberg, as the name of the old castle from which they dated their origin was *Wirtinberck* or *Wirtinberg*. From Ulrich, count of Wirtemberg, about the middle of the 13th century, the history of this country runs down in an uninterrupted line to our times. He is the real founder of the present reigning house, and was known as the most enterprising and the most gallant knight in Suabia. Eight times, says an old chronicle, he went to the field, and never was defeated. He died in 1265. His son and successor, Eberhard, reigned above 50 years. He was placed under the ban of the empire by Henry the VII., and driven from his country; but happily for him Henry died in Italy, after which Eberhard returned home, and transferred his residence to Stuttgard, as the castle of

Wirtemberg had been dismantled during his absence. His son, and several of his successors, enlarged their territory, which, after having been for a short time divided under two lines of chiefs, was again united under another count Eberhard, who was raised to the dignity of a duke by the emperor Maximilian I., in 1495, and who gave a kind of representative constitution to the country. Duke Ulrich introduced the Reformation in the middle of the 16th century, and joined the Schmalkaldian league, which led him into a war with Austria. His son Christopher remodelled the legislation and administration of the country. Under his successors, in the 17th century, the reigning house became divided into three lines. That of Stuttgard was continued by Eberhard, or Everhard III. Wirtemberg suffered much in the Thirty Years' war. Duke Charles Alexander, who reigned in 1733, became a Catholic, and ruined the finances by the bad administration of a Jew, Luss Appenheimer, who was at the head of the finance department, and who was hanged by Charles's successor. He left three sons under age, who all reigned one after the other. The last was Frederic Eugene, who had served in the Seven Years' war under Frederic the Great, and educated his children in the Lutheran creed. He was succeeded by his son, duke Frederic II., who, after an increase of territory occasioned by exchanges and acquisition, became an elector. He allied with Napoleon against Austria, and obtained, in the peace of Presburg, an augmentation of territory, and the title of king. He was one of the first German princes who entered the Rhenish confederacy on the 12th of July, 1806, when he again obtained an accession of territory. He was a firm adherent to Napoleon's system, and early after the battle of Leipzig entered into negotiations with the allies. He maintained his country on the *statu quo* in the congress of Vienna, but joined the German confederacy on the 1st of September, 1815. While the Congress was yet sitting, he summoned the States of his kingdom on the 11th of June, 1815, and laid before them the new constitution he intended to give to his territories. But the resistance of the States of the ancient part of Wirtemberg prevented the adoption of this new constitution; and the king yielded in so far, that the ancient constitution was to remain in Old Wirtemberg, but not to be extended to the new acquisitions. During these transactions the king died suddenly, on the 28th of October, 1816. He was a man of no common talents and information, and of great firmness and strength of mind; but his strong passions often drove him to commit the most despotical actions. His second wife and widow is the sister of the present king of England. He was succeeded by his son, Wilhelm I., born on the 17th September, 1781. A severe education, and several other circumstances, had kept him in a distance from his father. He was married to the princess of Bavaria, but this marriage was again dissolved by mutual consent, upon which the princess married the emperor of Austria, and he married the grand duchess of Russia, sister of the emperor. She died, deeply regretted, in 1819. The present queen, his third wife, is his cousin, and a princess of Wirtemberg. He has distinguished himself as a soldier on several occasions. At the age of nineteen he was present at the battle of Hohenlinden; and he afterwards commanded the Wirtemberg troops which accompanied Napoleon in the Russian campaign. During the last French war he always fought with great gallantry and distinction. He began his reign by retrenching many of his personal expenses, and proposed a new

constitution on the 3d of March, 1817, which was again rejected by the States, upon which he dissolved the assembly, but promised to reign in the spirit of the new constitution. He abolished bondage, and on the 31st of December, 1818, issued an excellent regulation for the organization of the municipalities, which was to serve as a ground-work for the new constitution. On the 10th of June, 1819, he again summoned the States, and expressed his positive determination to establish the new constitution, as a compact between him and the States. The plan of the constitution had meanwhile been much improved by the labours of the commission established for the purpose, and it was, after some consultation, unanimously accepted by the assembled States, and proclaimed on the 25th September, 1819.

Physical Features.] The surface of the country is mountainous; on the E. runs the Suabian Alb, and on the western edge the Black Forest; and from both several branches run in all directions into the country. The Alb is not so high as the Black Forest, but of a rougher aspect; it presents limestone and sandstone. Several remarkable caves are found in it. None of the mountains in Wirtemberg reach the line of snow; the highest point of that part of the Black Forest lying in Wirtemberg is the Katzenkopf, or 'Cat's Head,' 3,603 feet in height, and the highest point of the Alb is the Sternberg, 2,776 feet above the level of the sea. There are no plains, but large fertile valleys, of which those of the Neckar and Danube are the principal. The principal rivers are the Neckar, which receives the Kocher, the Jaxt, and the Enz; the Danube, which receives the Iller and the Blau; the Tauber; the Schussen; and the Arzen. The two latter fall into the lake of Constance, which is the only large lake in the kingdom. The climate is mild and healthy, though in the higher parts the winters are very severe.

Soil and Produce.] A few small tracts excepted, Wirtemberg is one of the most fertile and well-watered countries in Germany. It generally consists of champaigne lands, and pleasant well-watered vales; abounding in every necessary of life. Its fertility is such, that much more grain is raised than suffices for internal consumption, and hence considerable quantities are exported. But this grain is chiefly that species denominated spelt; rye and wheat being much less cultivated here. Of all the other sorts of grain, there is even however a sufficiency. Flax and hemp are also cultivated. The vallies—which are some of them 8 miles in length—are almost covered with forests of fruit-trees, which are also abundant in other parts of the country, cider and perry being the liquors drunk by the peasants when wine happens to be scarce and dear. Their mountains are not only full of minerals, but of vines. Their wines are rich, palatable, and wholesome; and are generally denominated *Neckar wines:* though each has a peculiar name of its own, received from the part where it is produced. Cherries are grown in great quantity in the districts of the Alb and the Black Forest, and used for making the celebrated strong liquor called *kirschwasser.* The forests, with which this country formerly abounded, have been very considerably lessened, and the consumption of oak particularly has been very great. Game and poultry are abundant, and large herds of horned cattle are reared in various parts of the country. In the neighbourhood of Ulm, a particular branch of industry is the feeding of snails: millions of these animals are fattened here in autumn and sent to Vienna and Italy.

Minerals.] Wirtemberg is by no means deficient in minerals. Its

mountains abound in marbles of variegated hues, some of which are esteemed as equal to those of Italy; and remarkably transparent alabaster, agate, crystalline pebbles, black amber, and fine millstones, are found here. The other minerals are, salt, cobalt, sulphur, coal, and porcelain-earth. The salt-works at Sulz produce salt sufficient to supply the kingdom. There are mines of silver and copper near Freudenstadt and at Konigswart; of silver at Konigstein, and of copper at Gullach, near Hornberg. Iron is also found, but this useful mineral was generally brought from Montbelliard, now belonging to France. There are many warm-baths and medicinal springs. Among the former, the most celebrated are those of Wildman. Heilbron is famous for its medicinal springs. There are also large salt-works, in the territory of Suabian Hall, lately ceded to Wirtemberg.

Manufactures and Commerce.] Wirtemberg is an agricultural and not a manufacturing country; only in a few towns are established manufactures of any extent. Several branches of industry, however, such as spinning, weaving, and lace-making, are carried on in this country, besides agriculture. Distilleries and oil-mills of great extent are found in several towns. The balance of exportation and importation stands in favour of Wirtemberg. The articles of exportation are cattle, fat oxen, corn, wood, tar, potash, oil, and a few articles of industry; those of importation are colonial wares, silk, and different articles of foreign manufacture.

Inhabitants.] The inhabitants are—with the exception of 8,319 Jews, and some families of Waldenses, and other colonists—all of German descent, speaking partly the Franconian, and partly the Suabian dialect. There were, in 1817, about 950,632 Lutherans, 432,616 Catholics, 2,308 of the Reformed creed, and 500 or 600 of other sects; the proportions of the different denominations remain, in all probability, much the same still, although the gross population has considerably increased. There is no established religion. The king himself may profess any Christian creed.

State of Education.] Wirtemberg is one of the most enlightened countries in Germany; it has produced a number of scholars, and two of the most celebrated modern poets of Germany. Wieland and Schiller were natives of this country. Perhaps no country in Germany, of the same extent, has produced so many distinguished scholars,—an honour for which it is indebted to the excellent establishments for education which have always existed here. There is one university, a number of gymnasiums, lyceums, and high schools, and several seminaries for Protestant and Catholic clergymen, and schoolmasters. Almost every village has its own school, which is carefully inspected, and provided with well-informed schoolmasters from the seminary at Eslingen. A special law directs that every child must attend school from 6 to 14 years of age, so that, in ancient Wirtemberg at least, there is scarcely one individual who cannot read and write.

Government.] Wirtemberg is a constitutional monarchy. The constitution acknowledges equal civil and political rights in every citizen of the State. None can be excluded by birth from any employment of the State. Personal liberty, security of property, and perfect freedom of conscience, is guaranteed to every citizen, besides liberty of emigration.[59]

[59] Emigrations, for a long time past, have been both frequent and numerous from Wirtemberg. These have been to Prussia, the Cape of Good Hope, but especially to the United States of North America. For such emigrations, no satisfactory reasons have yet been assigned by any writers: and Nicolai, the Berlin journalist, has sufficiently proved, that excess of numbers in that country, cannot account for the exten-

The ministers and officers of the State are responsible for their acts. The assembly of the State consists of two chambers; the upper one having for its members the princes of the royal family, and the chiefs of those noble families who formerly formed immediate States of the empire, besides certain hereditary members, and members for life, whom the king names; the lower chamber is elective. The transactions of both chambers are published, and the sittings of the lower are public. Without the consent of both chambers no laws can be enacted, changed, or abolished; complaints of faults or abuses in the administration are brought forward in them, and they have the right of granting the budget.[60] The king swears to the constitution when he receives the oath of allegiance. His person is sacred; and he is of age at 18. The succession is hereditary in the male line; the female is only to succeed if the male shall be entirely extinguished. Justice is administered by different courts; the clergy stands under consistories; and the Catholics have a vicar general. The 6 Catholic convents, which still exist here, are to be suffered to decay with the lives of their present inmates.

Revenue.] The revenue of Wirtemberg amounted in 1826, according to Balbi, to 23,761,000 francs, or £990,041 : 13 : 4*d.* The debt was, in 1817, 30 millions florins, for the liquidation of which there exists a fund, which in 1824 had reduced it to 24,152,035 florins, or £2,717,103 : 18 : 9*d.* According to Mon. Balbi, it was further reduced in 1826 to 56,500,000 francs, or £2,354,166 : 13 : 4*d.*

Military Force.] By the census of the Rhenish confederation, the military establishment of Wirtemberg was fixed at 18,000 men, and its contingent at 12,000, which were all called forth at Napoleon's orders, to assist in the grand Russian campaign, and most of whom perished with their French companions in arms. The number of troops furnished to the allies, during the first and second invasions of France, amounted to upwards of 20,000 men; but under the auspices of more peaceful times, the present sovereign has reduced his military establishment to 5,943 men; and fixed it at 18,995 in time of war. Every citizen of the State is, from the age of 21, subject to conscription for military service, which lasts 6 years.

Topography.] This kingdom contains 130 towns, 128 boroughs, 1,115 parish villages, 2,410 smaller villages, 2,591 farms, and 296 castles. It is divided into 4 circles, which have their own administration, and are subdivided into bailiwicks.

sive emigration, as it is not peopled beyond the means of subsistence; and, because in other countries, where the necessaries of life are obtained with much greater difficulty, and where the average population is still greater, few or none emigrate. He has himself, however, assigned a very stupid reason for these emigrations, namely, the severity of church-discipline, and the prohibitions, against profaning the Sabbath, and the strictness with which the moral and religious conduct of the people is investigated; if so, then surely the people of Wirtemberg must be both very immoral and irreligious, who cannot submit to such discipline; and these emigrants must certainly be of a very different stamp from our old English Puritans, who emigrated to the wilds of America, not because discipline was too severe, but because it was too lax, and because they were compelled by statute to profane the Sabbath, in their native country. Perhaps the emigrations may originate in that spirit of enterprise and thirst for independence which intellectual improvement never fails in a greater or less degree to awaken, and which, seeing no prospect of being immediately gratified at home, invests some beloved object, when it seems to glimmer on the verge of the distant horizon, with all the attributes of glory, and pursues it with all the ardour which an inflamed imagination can inspire.

[60] Austrian despotism has compelled the king—though not till after a resistance greatly to his honour—to put some restrictions on the liberty of the press with regard to political newspapers.

1st. The Circle of the Neckar.] This circle is an extensive valley, through which the Neckar flows, on both sides bordered by mountains and hills, which in some points rise to about 1,560 feet: on the right side of the river are some smaller valleys, as the Remsthal, the Murrthal, and the Kocherthal. All these valleys are fertile and well-watered. Besides the Neckar, the principal rivers are the Ens, the Rems, and the Murr. The climate is the mildest of the whole kingdom. The population, chiefly Lutheran, amounts to nearly 390,000, who are mostly employed in agriculture.

Cities of Stuttgard, &c.] Stuttgard, or Stuttgart, the metropolis of the kingdom, lies near the Neckar, and in the middle of Wirtemberg Proper. It is an indifferently built city, containing a magnificent royal palace, an academy for painting, sculpture, and architecture, established in 1701, a large opera house and theatre, several elegant public edifices, and 32,000 inhabitants. It is situated on the Nesenbach, a few miles above its influx into the Neckar, nearly equidistant from the Danube and the Rhine, and 72 British miles to the N.E. of Strasburg. The city is small, but the suburbs are considerable and handsome. Though surrounded by a wall flanked with towers, it is a place of no strength, and has been frequently captured. It is greatly resorted to by invalids, on account of its baths, which are supposed to cure many diseases. There is an extensive gymnasium or college, with an observatory, several high schools, and a school of industry. The royal library contains 200,000 volumes, with a collection of 12,000 Bibles. The inhabitants manufacture silks, stockings, and ribbands: and the adjacent hills are covered with vines. Long. 9° 10′ E. of Greenwich, and N. Lat. 48° 50′.—Esslingen, on the Neckar, contains 5,591 inhabitants.—Heilbronn, on the Neckar, surrounded with high walls and deep ditches, has 6,885 inhabitants, and a city library of 12,000 volumes.—Kannstadt, on the Neckar, has 37 mineral springs in its neighbourhood. The ancient castle of Wirtemberg was till 1320 the residence of the reigning family. It is situated on a mountain 1,175 feet high.—At a little distance from Ludwigsburg, is the castle of Monrepos, the seat of the dowager queen. Above the borough of Asperg, rises a rock to the height of 1,037 feet, on which the fortress of Hohenasperg is built, which serves for state-prisoners.—In the neighbourhood of Heilbronn, the best Neckar wines are manufactured. Weinsberg, at the foot of a mountain called Weibertrene, or 'woman's faith,' on which formerly stood an old castle, contains 1,703 inhabitants. In the valley around here good wine is grown.[61]

2d. Circle of the Black Forest.] This circle lies in and upon the Black Forest, which covers the whole western part, and spreads several of its branches into the interior: on the E. the Alb stretches. It has not so mild a climate as the circle of the Neckar, although several of its valleys are fertile. The Neckar has its sources in this circle, and the Danube flows through a small part of it. Having less agriculture, this circle is more industrious than the former, though there are no extensive

[61] The name *Weibertrene* relates to an anecdote told of the town during the war between the Guelphs and Ghibelines. Duke Welf, or Guelph, had a garrison in this town, which was besieged by the emperor Conrad III., and being unable to stand out any longer, the emperor, whose mercy they implored, granted free departure to the women, and permission to carry with them what they thought most precious, but all the men were to be put to the sword. The morning fixed for their departure, each woman went out carrying her husband on her back. Conrad kept his word, and the town was spared. This anecdote forms the subject of a ballad by Bürger, a very popular German poet.

manufactures. Spinning and weaving is carried on in the country, and in several towns. Ehingen, on the Schmiecha, with 5,000 inhabitants, is one of the most industrious towns of the kingdom, and contains some manufactures of broad cloth, and hosiery.—Reutlingen, on the Echaz, with 10,000 inhabitants, has some manufactures, and extensive tanneries. The buildings are almost all in the style of the middle ages. In the neighbourhood of Fullingen is the Nebelloch, a remarkable cave, with 6 grottoes, and the ruins of the castles of Stahleck and Greifenstein. Tubingen, on the Neckar, with near 7,000 inhabitants, is the seat of a university, with 5 faculties, 38 professors, and a library of 30,000 volumes. The very learned and pious John Albert Bengel, whose literary labours in Biblical criticism paved the way for those of a Wetstein, a Michaelis, and a Griesbach, was a professor in this university.

3d. The Circle of the Danube.] The population of this circle is estimated at 360,951. On the N. side of the Danube, almost all are Lutherans, but on the S. side the Catholics and Jews are numerous. It contains 30 towns, 32 boroughs, and 2,015 villages and hamlets. The northern part beyond the Danube is covered by the Ranhe Alb; the southern part on this side of the Danube consists of ridges of small mountains and hills. The soil of this circle, except on the northern edge, is more fitted than any other in Wirtemberg for the purposes of the agriculturist. The richest districts are those between the Danube, the Iller, and the Lake of Constance. Fruit is grown in great quantity. The roads are good.—Biberach, on the little river Reuss, contains 4,451 inhabitants, of whom 2,789 are Lutherans. It possesses some considerable breweries, tanneries, and manufactures of broad cloth, and is celebrated as the birthplace of the poet Wieland, and the scene of a battle between the French and Austrians in 1796.—Goeppingen, with 4,423 inhabitants, conducts several manufactures.—Near the little borough of Hohenstaufen are the ruins of the castle, from the early possession of which the Hohenstaufen family dates its origin.—Friedrickshaven, on the Lake of Constance, with a castle and 778 inhabitants, possesses a port on the lake which has been declared a free port.—Ulm is a considerable city, at the confluence of three rivers, the Blau, Iller, and Danube. Here the Danube becomes navigable by vessels of burden, and over it is a stately stone bridge of four arches. The territory belonging to it, now transferred to Wirtemberg along with the city, is about 26 British miles long, and 18 broad, containing 40 bailiwicks and lordships. Its cathedral, the largest in Germany, was 111 years in building. It is a vast structure, 416 feet long and 160 broad. It has five spires, the loftiest of which is 337 feet in altitude, and is, next to the steeple of Strasburg, the highest in Europe. It possesses a grand organ with 2,952 pipes, and some fine paintings of the old German artists. The inhabitants of Ulm embraced the Reformation. It now conducts a considerable trade by means of the Danube, in wine, silk, and paper, but its commerce has greatly declined. Its name is derived from the vast number of elm-trees in its vicinity. This city, like Augsburg, has an arsenal, a Protestant academy, and a valuable library. The diets of Suabia were usually held here. It lies 42 British miles west of Augsburg. Population, 14,000.

4th. The Circle of the Jaxt.] This circle is in most parts very well cultivated, and produces corn, wine, and fruit; but its principal riches consist in cattle, of which a great number is exported. Sheep are also numerous, and bees are extensively reared in some parts. The total

population is about 320,000.—Hall, the capital of the circle, is delightfully situated on the river Kocher, and contains 6000 inhabitants, who manufacture annually from the salt springs in the neighbourhood, about 80,000 cwt. of salt.—At Ellwangen, on the Jaxt, with 2,293 inhabitants, considerable fairs, particularly for cattle and horses, are held.—Mergentheim, a town of 2,398 inhabitants, was formerly the seat of the grand master of the Teutonic order, whose castle is here.—Beutelspark, a borough, with 1,644 inhabitants, contains an abbey, with the burying-place of the ancient counts of Wirtemberg.

CHAP. XIII.—GRAND DUCHY OF BADEN.

The grand duchy of Baden, created out of the margraviate of the same appellation, holds the 7th place in the German confederacy, with 3 votes *in plenum*, and takes its name from the ancient castle of Baden. It is situated in the south of Germany; and is bounded on the N. by the grand duchy of Hessen; on the N.E. by Bavaria; on the E. by Wirtemberg, and the principality of Hohenzollern; on the S.E. by the Lake of Constance; on the S. by Switzerland; on the W. by France; and on the N.W. by Bavaria. It is entirely connected, with the exception of the borough of Schlüchten, which is enclosed in Wirtemberg; and it encloses, on the other hand, the canton of Schaffhausen, and the fort Hohentwiel, belonging to Wirtemberg, in its boundaries. Its superficial extent is reckoned by Stein at 280 German, or 6,000 British square miles; and its population at 1,090,910. Hassel states the territorial extent at 272.50 German square miles, and the population at 1,001,630. This calculation, however, was made in 1817. Balbi states the population to have been, in 1826, 1,130,000.

History.] Within the districts of this duchy, which in the time of the middle ages, belonged to E. Franconia, a branch of the Alemannian league, had spread itself at a very early period; and in the 11th century we find the first authentic historical notice of the first founder of the reigning house in the person of count Berthold I., who built the castle of Zähringen. He assumed the title of a duke, with the consent of the emperor Henry III. Hermann II., who died in 1130, took the title of margrave, which remained to the country and its rulers. After frequent divisions of the country between brothers, and re-unions of territory, two lines were formed in the 16th century by the two sons of the margrave Christoph I., who died in 1527. Bernhard founded the house of Baden-Baden; and Ernest that of Baden-Durlach. Both were Protestants; but the former embraced Catholicism at the end of the 16th century. The line of Baden-Durlach remained Protestant, and, after the extinction of the former in 1721, came into the possession of the whole margraviate. In the peace of Lueneville, the margrave Charles Frederic obtained by exchanges of territory a considerable augmentation of land and population, and the title of an elector. The treaty of Presburg, his entering the Rhenish confederacy, and the peace of Vienna, augmented the population of his dominions, which contained formerly not quite 300,000 inhabitants, to above 1,000,000. After the dissolution of the German empire, and his entrance into the Rhenish confederacy, he took the title of grand duke. He died in 1811, generally and justly regretted. He had not only increased his estates, but also greatly improved the

administration. He was succeeded by his grandson, Charles: having lost his eldest son. The grand duke, Charles, was married to an adopted daughter of Napoleon, the princess Stephania, and died the 8th of December, 1818, without leaving a son. After the battle of Leipzig, he entered into the German confederation, and preserved the political unity of his State. A few months before his death, the new constitution was introduced. But he did not live to open the chambers. He was succeeded by his uncle, Lewis, or Ludwig, who opened the chambers for the first time on 22d of April, 1819, but dissolved them the 28th July, before they had decided on the budget. In the following assemblies, some misunderstandings seem always to have arisen between the States and the government.

Physical Features.] This country is a large valley formed by the Rhine; on the E. terminated by the Black Forest; and reaching on the N.E. to the banks of the Mayne. It has few plains, but several pleasant valleys, which, with the accompanying mountains crowned with wood, the picturesque rivers, and fine cultivation, present a most magnificent panorama. The declination is mostly towards the Rhine, to the basin of which belong almost all the waters of the country. The soil is on the whole very productive.

Mountains.] Parallel with the Rhine runs, from the well-known cataract, the principal ridge of Suabia, the Black Forest. It consists of primitive granite rocks, the higher points covered with sandstone; the granite is accompanied by other kinds of rock, and the principal ridge is surrounded with floetz mountains, between which lie the valleys. The highest points are the Feldberg, 4,917 feet, and the Belchen, 4,645 feet in altitude. Several remarkable caves with stalactites occur in this chain. In the N. is the Odenwald, a continuation of the Black Forest of less height. This volcanic mountain is intersected by a number of well-watered valleys, and is covered with wood. To its highest points belong the Katzenbuckel, 1,898, and the Winterhauch, 1,792 feet above the level of the sea.

Rivers.] The Danube has its sources in this country at Donaueschingen, but runs only through a small part of it. Of much more importance to Baden is the Rhine; to its basin belong the Mayne, the Neckar, the Kinzig, the Murg, and the Itz.

Lakes.] Among the lakes, that of Constance, belonging partly to Baden, is by far the largest. It lies 1,161 feet above the level of the sea; but has not been entirely frozen since 1695. It is often extremely stormy with foaming waves. It contains 26 species of fish, and 20 of shellfish. There are two islands on the lake, viz. Mainua and Reichenau. The navigation is animated, but not much extended to the general commerce of Germany. Among the smaller lakes are the two Ilmensees, the Schluchsee, on the Feldberg, 2,440 feet above the sea, the Eichorersee and the Mummelsee. In the valleys along the Rhine we find a mild delightful climate, and a luxurious vegetation. From Manheim down to Basel all plants of the S. of Germany prosper in their full beauty. Every species of corn, fruit, and vine, grows upon the hills; even almonds and chesnuts are raised in this district. In the high countries of the Black Forest and the Odenwald there is a long winter, and scarcely any spring and autumn. However, there also the climate is healthy.

Minerals and Mineral Waters.] Native silver, and different silver ores are found in the mine of Wenceslaus, near Altowlsach, but no

particular account of the produce is given. The mines of Oberwert and Canderon produce excellent iron. Quarries of freestone and marble are abundant; and some agates are found in the valleys watered by the torrents that descend to the Rhine. Baden is celebrated for the vast number of mineral waters and hot baths which it contains. In the city itself, there are upwards of 300 hot baths. These occasion a great resort of nobility from all parts of Germany, which both enriches and civilizes the people, who are uncommonly polite and courteous to strangers. Some of the baths at Baden are scalding hot, and all of them run from rocks of alum, salt, and brimstone. One of these baths is called *the kettle;* in it the water boils furiously, and smokes as if placed over a furnace. A number of hot baths also occur at the town of Badenweiler, but the temperature is not so great as that of the Baden baths.—Almost all hands being occupied in agricultural industry, there are very few manufactories. On the Black Forest the inhabitants manufacture wooden clocks, and other wooden tools. The country is very advantageously situated for commerce, but what presently exists is unimportant.

Inhabitants.] The inhabitants of Baden belong to the High German race; their ancestors were partly Alemannians, and partly Slavonians. Their language is a hard High German dialect. There are about 15,000 Jews. The three Christian confessions, Catholic, Lutheran, and Reformed, have entirely equal toleration in Baden, there being no established religion; but the government exercises great prerogatives in the affairs of each establishment.[62] The Catholics form the majority, amounting to about 663,000. The Lutherans—which religion the present grand duke professes—amount to about 248,500; and the Reformed church numbers nearly 83,000 adherents.

Education.] Much has been done in later times for education. There are two universities, one Catholic and one Protestant; of which the latter, at Heidelberg, is one of the best in Germany. The superintendence of public instruction, with the exception of the universities, stands under a royal commission. In general the members of each persuasion have their own public schools; but in case that their number is not sufficient for that purpose, in any town or village, or that the means of supporting the schools are wanting, then the school of one confession joins that of another, and all are obliged to submit to such rules and regulations as are not opposed to their own religious faith and maxims. But in such a case the instruction in religious doctrine always belongs to the respective clergyman of each creed. Besides, there are throughout the whole country Sunday and evening schools, which are attended by children of every persuasion. The higher public schools, even when they belong to believers of one church, can be frequented by persons of a different faith,

[62] In general, the supreme authority of government over every church establishment in the grand duchy, comprehends the following prerogatives, viz.—1. The inspection of all the acts and doings of the churches by government, that nothing shall happen that may endanger the peace of the country. 2. The right to take notice of and authorize any publication, as well as the installation of the different ministers of the church. 3. The right to exclude every person from a church employment who does not meet with the approbation of government. 4. The right to authorize the foundation of convents or ecclesiastical societies, or to abolish them, if contrary to the ends of public peace and safety. 5. The right of appointing or confirming the servants of the church, proposed for that purpose by the church establishment. 6. The right of interfering in, and arranging all quarrels and complaints originating from transgressions or abuses of the church and its servants.

as it happens with regard to the children of Jews. In places where Protestants and Catholics are living together, the professors of the higher schools are generally half Protestants and half Catholics.

Government.] Baden is an hereditary constitutional principality, with the succession in the male line. The person of the duke is sacred, according to the constitution; but the ministers are responsible. The inhabitants of the grand duchy of Baden enjoy equal civil and public rights, and when they are of the Christian persuasion, have the same claims to every place in the civil administration as well as in the army. There are two chambers, of which the one is elective; and justice is administered by several tribunals.

Revenue.] The revenue in 1826 was 20,353,000 francs, or £848,041 : 10 : 2*d*. The public debt in 1810 was estimated at 18 millions of florins, or £2,250,000. In 1826, it was reduced to 39,000,000 francs, or £1,625,001

Army.] The army amounts to between 8,000 and 10,000 men, exclusive of the militia; but if the whole of the latter were summoned it might be raised to 100,000 men.

Topography.] Baden is divided into 6 circles, which are again subdivided into bailiwicks, having each its own administration. There are 108 towns, 36 boroughs, and 2,427 villages and hamlets in this country.

1*st. The Murg and Pfinz Circle.*] This circle forms a part of the large valley of the Rhine. Carlsruhe, the chief town of the duchy, is one of the finest towns in Germany. All the streets diverge from the castle in straight lines like the rays of a star, and the houses are regularly built. It contains 19,000 inhabitants, of whom about 790 are Jews. There are a theatre and some fine public buildings here. The library contains 70,000 volumes; and the beautiful gardens of the grand duke are open for public walks.—Baden contains 3,180 inhabitants. The environs are beautiful, and the number of visitors is sometimes upwards of 3000.—Pferzheim, on the Enz, with 5,301 inhabitants, contains several manufactories, particularly of jewellery, which occupy about 900 or 1000 people.

2*d. The Circle of the Kinzig.*] The climate is here mild in the valley of the Rhine; but very severe in some parts of the Black Forest, where some of the valleys are so narrow that the sun does not penetrate into them for 3 or 4 months in the year. Agriculture, and the rearing of cattle, are the principal branches of industry. Offenburg is the chief town of the circle, with 2,880 inhabitants.—The sovereignty of the county of Hohengeroldseck, a small district not exceeding 50 square miles, was, by treaty in 1819, given to Baden, and forms a part of this circle.—Kehl, a small town, on an island formed by the Rhine, opposite to Strasburg, was lately a strong fortress; but the works were demolished in 1815.

3*d. The Circle of Treisam.*] This circle—which takes its name, like the rest, from one of its rivers—contains the greatest and highest part of the Black Forest, of which many mountains are during eight months of the year covered with snow. The valley of the Rhine is very small, but in the neighbourhood of the river very fertile. Freyburg, with 10,108 inhabitants, is the chief town. Here is a Catholic university, one of the best in any Catholic country in Germany, with 28 professors. The Minster is a very fine Gothic building.—Heitersheim, at the foot of the Black Forest, with 1,438 inhabitants, has a fine castle, formerly the

seat of the grand master of the order of St. John.—Breisach, a town of 2,514 inhabitants, had formerly a very strong citadel on the Eggardsberg.

4th. The Circle of the Lake.] This circle has its name from its situation on the Lake of Constance. In its circumference lie Hohentwiel, belonging to Wirtemberg, a part of the canton of Zurich, and in the S.W. the canton of Schaffhausen. The Danube rises in this circle. The Rhine flows through the Lake of Constance. The soil is more fit for pasture and the growing of vines, than for agriculture. Constance, situated on the Rhine, where it comes out of the lake, contains 5000 inhabitants. Much wine is grown around it. The council of Constance sat here from 1414 to 1418.

5th. The Circle of the Neckar.] This circle is so extremely well cultivated, that a part of it resembles a garden; but the wine which is grown here is not of a particularly good quality. Fruit is excellent, and in great quantity. Chesnuts and nuts are articles of exportation. In this circle, the establishments for education are better than in any of the others. Mannheim, the chief town of the circle, is beautifully situated on the Rhine, over which is a bridge of boats. It is very regularly built, and divided into 4 quarters, which form 28 squares; all the streets being straight, and cutting one another at right angles. The houses are all of the same height. The magnificent castle is 750 feet long; and there is a library of 70,000 volumes. The number of inhabitants exceeds 21,000.—Heidelberg, on the Neckar, over which leads a bridge of 702 feet length, and 30 feet breadth, contains upwards of 10,000 inhabitants. Close above the town is a beautiful old castle, in the cellar of which is shown the celebrated tun or wine-cask of Heidelberg. The Protestant university here was founded in 1386, and is the oldest of all existing German universities. There are 45 professors, a library of 30,000 volumes, and a botanical and experimental garden. The scenery around Heidelberg is beautiful.

6th. The Circle of the Mayne and Tauber.] More corn is produced here than is needed for home consumption. The growing of wine along the Mayne is considerable. Establishments for education are much wanted; and those existing are in a very defective state. Wertheim, with 3,227 inhabitants, is the chief town.

CHAP. XIV.—THE ELECTORATE OF HESSEN.

THE electorate of Hessen, or Hessen-Cassel, has been created out of the former landgraviate of Hessen-Cassel. It takes its name from the tribe of the Hesses, who, in the middle ages, occupied the country around the Fulda and Werra, and were either derived from the Catti of Tacitus, in direct line, or seem to have been blended with them at an early age. Hessen-Cassel is bounded on the N.W. by the Prussian province of Westphalia; on the N.E. by the kingdom of Hanover; on the E. by the Prussian province of Saxony, the grand duchy of Saxe-Weimar, and by Bavaria; on the S.E. by Bavaria; on the S.W. by the grand duchy of Hessen and the dominions of Francfort; and on the W. by the grand duchy of Hessen, and by Waldeck. The surface is 204.09 German square miles, according to Hassel. Stein gives 209. Perhaps, including the detached territories, 4,350 British square miles will be near the truth. The population was returned to the Confederacy at 545,208;

subsequently it was estimated at 585,100, by Stein; and in 1826 it amounted to 592,000, according to Balbi.

History.] Hessen belonged to the Frankish empire; and till about the middle of the 13th century its history is blended with that of Thuringia. It was only after Henry I., after a violent struggle with the house of Meissen, had got into tranquil possession of Hessen, that the emperor Adolph of Nassau declared it an immediate fief of the empire. Henry made Cassel his residence. After his death the country was divided between his two sons; but one of them having died, it was again united under the other. After several unions and dismemberments, we find it, in 1500, again united under William, who left it at his death to his son Philip, then only five years of age. The troubles which distracted Germany, at this period caused the emperor Maximilian, in 1508, to declare the young landgrave—whose great qualities he foresaw—of age at fourteen. The young landgrave, who obtained for himself the honourable appellation of the Magnanimous, introduced the Reformation into Hessen, and with the secularized goods of the church, founded the university of Marburg, and 4 hospitals. It was he who, in 1529, negotiated the famous interview between Luther and Zuingle for the purpose of adjusting their differences. He undertook the direction of the Schmalkaldian league, together with the elector of Saxony, and became a prisoner of Charles V., in the battle of Muhlberg. He obtained his freedom after a captivity of five years, and divided his possessions, by testament, in 1562, among his four sons; but two of them having died, only the two principal lines of Cassel and Darmstadt remained. William IV. founded the line of Hessen-Cassel. William VIII. was an ally of England in the Seven Years' war, in which his soldiers gained honour and reputation, but his country only misfortune. His son, Frederic II., maintained a brilliant court, and a considerable army, which he sold to England to fight against the cause of American independence. His son, William IX., took part in the war of the Revolution against France, but entered into the treaty of peace at Basel, and since that time adhered to Prussian politics. He was indemnified for his cessions beyond the Rhine by some other districts, and named elector. In the war between France and Prussia, he declared himself neutral; but after the battle of Jena, he was driven from his country on the allegation of his having secretly favoured the Prussian interest, and his dominions incorporated with Jerome Bonaparte's kingdom of Westphalia. After the victory of Leipzig, the elector returned to his country, and retained his title, although election no longer exists in Germany. William convened an assembly of the States in 1814, but could not agree with them regarding a new constitution. He died on the 27th of February, 1821, and was succeeded by his son, William XI., who has established a new administration, and a new division of the country.

Physical Features.] Hessen-Cassel is a mountainous country, intersected with valleys, which offer much picturesque scenery—particularly the fine valley of the Fulda, in which the capital lies. The principal mountains are the Thuringian Forest, to which belongs the Inselberg, 2,791 feet in altitude; the Werra Mountains; the Rhön; the Fulda Mountains, not very high, but remarkable for their volcanic origin and beautiful forests; the Mountains of Hanau; and the Sünter. The principal rivers are the Weser, the Mayne, and the Lahn.

Productions—Industry.] Hessen-Cassel produces game, corn, fruit,

wine, flax, and hemp. Near Frankenberg is a gold mine, and some gold sand is found in the Eder. Silver, copper, lead, and iron, are found in considerable quantities, as also alum, vitriol, sulphur, coal, marble, and alabaster; with several salt springs, mineral waters, and medicinal baths. The state of agriculture here is inferior to that of the neighbouring Hanoverian, Prussian, and Saxon provinces. There are few manufactures, except linen-weaving, which is carried on all over the country. There is some commerce of exportation, and a considerable transit. But the balance between importation and exportation stands against the country.

Inhabitants.] In 1818, there were 329,200 Calvinists, 140,000 Lutherans, 90,000 Catholics, 8,500 Jews, and 200 Mennonites in this country. The Hessians are a strong and well-formed race; they have a military appearance, but a dull phlegmatic constitution. The women of the lower classes are neither handsome nor pleasant. The Hessians on the whole are a brave and upright people; but they have no genius, and are little adapted for the cultivation of the arts. No distinguished poet or author of genius in German literature has been born in Hessen.

Education.] The Hessian establishments for education are inefficient; the elementary schools are not good, and the university at Marburg, though a little improved of late, cannot compete with any other German university. An ordonnance issued or renewed in 1818, allows only the sons of nobles, and those civil officers who have equal rank with them, and the *eldest* sons of clergymen to enjoy a liberal education! There is a very severe censorship not only upon native publications, but also on the importation of foreign books, lest any liberal and enlightened principles might, by this means, be diffused in the country.

Government.] Hessen holds the eighth place in the German confederacy, and has 3 votes *in plenum*. The elector is an absolute sovereign: no constitution existing at this moment. The succession goes in the male line; the prince is of age at 18.

Revenue.] The revenue amounted to about £643,750 in 1826, according to Balbi, and the debt to £274,166 : 13 : 4*d*.

Army.] The whole military force consists of about 18,000 men; in 1826, the regular army amounted to 5,679. They are levied by conscription. Hessen-Cassel was, in 1821, divided into 4 provinces: namely, Lower Hessen, Upper Hessen, Fulda, and Hanau.

Towns.] Cassel, the capital, with 26,000 inhabitants, lies on the Fulda. There are several magnificent public places and splendid buildings, among which the museum, containing a library of 70,000 volumes, a cabinet of antiquities, and one of natural history, is the finest. There is also a fine theatre. Cassel was the capital of the kingdom of Westphalia, and Jerome held here one of the most brilliant courts in Germany; the population was then increased to 23,167, but the most wealthy part left Cassel in 1813. A straight alley runs from Cassel to Wilhelmshöhe, a magnificent palace with a collection of beautiful pictures belonging to the elector. There is here a copper statue of Hercules, 30 feet high, elevated on the top of a rock, rising to the altitude of 1,312 feet above the level of the sea, from which an artificial cascade runs down with a fall of 190 feet.—The castle of Philippsthal is the residence of the landgrave of Hessen-Philippsthal, a side-line of the reigning house. Schmalkalden, on the river of the same name, and celebrated for the Schmalkaldian league concluded here in 1531, contains 4474 inhabitants. Marburg, on the Lahn, with 7000 inhabitants, is the seat of a university,

with 34 professors, and a library of 56,000 volumes.—Fulda, on the Fulda, with 8,000 inhabitants, was formerly the seat of a sovereign bishop. In the Minster, an ancient building here, is the grave of St. Bonifacius.—Hanau, near the Mayne, into which the Kinzig falls, is a fine town, very regularly built, the streets straight, and cutting one another in right angles, with a population of 11,997 inhabitants.—Nenndorf, a village, is celebrated for its asphaltic sulphurous waters, which are annually visited by above 800 persons.

CHAP. XV.—THE GRAND DUCHY OF HESSEN-DARMSTADT.

The grand duchy of Hessen-Darmstadt consists of two large, and several smaller districts. The southern part is bounded on the N.W. by Nassau; on the N. by Francfort and Hessen-Cassel; on the N.E. and E. by Bavaria; on the S. by Baden; on the S.W. by Bavaria; and on the W. by the Prussian province of the Lower Rhine. The northern part—of which some small districts lie enclosed in the counties of Waldeck and Nassau—is surrounded on the N.E. and S. by Hessen-Cassel; on the S.W. by Francfort and Hessen-Homburg; and on the W. by Nassau and the Prussian province of the Lower Rhine. Stein estimates the superficial extent of this country at 153 German square miles; Hassel at 193.30, or 4,156 British square miles.

History.] The earlier history of the reigning house of Hessen-Darmstadt has been already told. George the I., son of Philip the Magnanimous, who succeeded to the lands of Darmstadt, left three sons in 1595, of whom the eldest, Louis V. succeeded in Darmstadt; Frederic, the second son, became the founder of the line of Hessen-Homburg; and the third, who had got Ratzbach, died without heirs, and his lands reverted to the elder line. Under several of the succeeding princes the territory was increased, and the present prince, Louis X., obtained also, by the exchanges which took place at the peace of Luneville, some further augmentation of territory. In 1806, the landgrave joined the Rhenish confederacy, and took the title of grand duke; and in 1813 he joined the German confederacy, after having again made some exchanges of territory. On the 18th of March, 1820, he promulgated a constitution, and established two chambers; but the States having objected strongly to the constitution as then proposed, some changes were made on it, whereupon it was adopted by the States on the 20th of December, 1820.

Physical Features.] The whole country is mountainous; but where the majestic Rhine breaks through the southern part, it expands on both sides into fertile plains. The northern part partakes of the features of northern Germany, whilst the southern is adorned with the luxurious vegetation of the south of Germany.

Mountains.] The principal mountains are the Odenwalde, along and across which runs the celebrated road from Darmstadt, near to Basel, called the *Bergstrasse*, or 'Mountain-road,' begun by the Romans, and which is celebrated for the romantic scenery of its environs. To this ridge belongs the Malchen, which was formerly believed to be the *Melibocchus* of Ptolemy, and from which there is a beautiful view. The Höhe, a mountain known by the Romans under the name of *Taunus*, and of which the Feldberg, 2,605 feet high, is one of the principal points, rises here. The Vogelsberg is a ridge consisting principally of basalt. The princi-

pal rivers are the Rhine, the Nahe, the Neckar, the Main or Mayne, the Lahn, and the Eder.

Productions.] The productions in the southern part are those of the south of Germany. The rearing of cattle is a principal branch of agricultural labour in the highland districts.

Population.] Hassel estimates the population at 633,026. They have reached a higher point of civilization than those of Hessen-Cassel. There are a few Frenchmen and Waldenses, and about 15,000 Jews. Of the above population, the Lutherans amounted to 366,000; there were 140,000 Catholics; 98,000 Calvinists; and 1000 Mennonites. In 1826, the population had increased, according to Balbi, to about 700,000.

Government, &c.] Hessen-Darmstadt holds the 9th place in the confederacy, with 3 votes *in plenum*. The succession goes in the male line; the grand duke is of age at 18. The constitution secures equality of rights to every citizen without distinction of religious creed in the Christian confessions. The revenue amounted in 1826, according to Balbi, to £652,763 : 13 : 4*d.*; and the debt to £1,125,000. The military force, without the militia, amounts to about 8 or 9000 men; the contingent is 6,195 men.

Topography.] The grand duchy is divided into 3 large provinces: viz. Starkenburg, Rhine Hessen, and Upper Hessen.

The capital is Darmstadt, the residence of the grand duke, with about 20,000 inhabitants. It contains a gymnasium, with a library of 90,000 volumes, a theatre, and a fine park. The new part of the town is well-built. In the neighbourhood is a magnet rock.—Offenbach, on the Mayne, with a population of near 8000, is the most industrious town in the country. There is a very extensive manufactory of tobacco, and another of snuff here; jewellery, paper, hosiery, and musical instruments, are objects of a very lively industry.

Cities of Mentz, &c.] Mayence, or Mentz, situated a little below the confluence of the Rhine and Mayne, on the left bank of the former, once the seat of an archbishopric, and the capital of an electorate, contains a population of 25,000. Though pleasantly situated, and well-provided with churches, Mentz is but indifferently built. The streets are generally narrow; and there are three regular ones, which run parallel to each other from the Rhine.[63] The fortifications are very extensive, and the city has both an Austrian and Prussian garrison. There is a bridge of boats over the Rhine 1,722 feet long. Mentz has a public library of 90,000 volumes, and a museum of Roman antiquities, said to be the finest out of Italy. The cathedral is very large, and remarkable as the burial place of several distinguished individuals, among others, of the celebrated Minnesinger, Frauenlob. Mayence early occurs in German history; it was here that the Roman general, Drusus, built his

[63] In 1631, it was captured by the great Gustavus, who kept his Christmas here, attended by 6 sovereign princes, 12 ambassadors, and a great number of the German Protestant nobility. In 1792, it was taken, almost without opposition, by the French, though defended by a garrison of 6000 men. In 1794, it was recovered by the Prussians, after a long and obstinate defence, in the course of which both the inhabitants and garrison experienced all the horrors of famine. It was frequently but vainly besieged or blockaded by the French in the subsequent period of the war. But what could not be accomplished by sieges, was obtained by treaty; and Mentz was given up to the French, by the peace of Campo Formio, in 1797. Though capable of a long and protracted defence, it was abandoned by the French troops in the commencement of 1814; and is now declared to be one of the four federal fortresses of Germany, to be maintained, as a bulwark against French invasion, at the charge of the German confederation.

fortress of *Moguntiacum;* here Bonifacius, the apostle of the Germans, was first bishop; and in this city the art of printing was first cultivated. There are an aqueduct and several Roman antiquities in the neighbourhood. Mentz is 41 British miles N.W. of Manheim, 22 British miles S.W. of Frankfort on the Mayne, 50 miles S.E. of Coblentz, 100 miles S.E. of Bonn, 117 S.E. of Cologne, 75 miles E.N.E. of Treves, and 82 N.E. of Sarrelouis, 60 miles S. of Landau; the three last distances are horizontal, being taken upon a map: 8° 12′ Long. E. of Greenwich, and 50° 2′ N. Lat.—Castel, or Cassel, with 1,908 inhabitants, on the right side of the Mayne, has 4 strong forts belonging to the fortifications of Mayence.—Bingen, with 3,223 inhabitants, is situated on one of the most beautiful spots of the district, called the Rhinegau, where the Nahe flows into the Rhine, and where high and narrow rocks cause the famous whirlpool called the *Bingerlock.* Here are also bishop Hatto's *Mausethurm,* or 'Mice Tower,' and the ruins of the castle of Ehrenfels. Worms, with 6,230 inhabitants, is a very ancient, and was once an important free town. Several important diets were held here, particularly those of 1495 and 1517, which proclaimed the public peace, and that of 1521, which was followed by the edict against Luther.—Giessen, with about 7000 inhabitants, has a university with 23 professors, and two libraries, one of 18,000, and one of 25,000 volumes. It lies on the Lahn.

CHAP. XVI.—THE DUCHIES OF HOLSTEIN AND LAUENBURG.

We have already described these two duchies in our account of Denmark. The king of Denmark holds for these countries the 10th place in the German confederation with 3 votes *in plenum.* Their contingent to the army of the confederacy is 3,600 men.

CHAP. XVII.—THE GRAND DUCHY OF LUXEMBURG.

The king of the Netherlands holds the 11th place in the confederacy, with 3 votes *in plenum,* for Luxemburg. The contingent to the army of the confederacy is 2,556 men. The description of this duchy will be given in our account of the Netherlands.

CHAP. XVIII.—THE GRAND DUCHY OF SACHSEN-WEIMAR.

The grand duchy of Sachsen-Weimar and Eisenach, forms a part of the possessions of the dukes of Saxony of the Ernestine line, and the grand duke is the chief of this line. On the N. and N.E. lies the Prussian province of Saxony; on the E. and S.E. it is surrounded by the principalities of Altenburg and Reuss, and by the Prussian dominions; on the S. by the Schwarzburg, Prussian, Gothen, Meiningen, and Bavarian dominions; and on the W. by Hessen-Cassel. The territorial surface is 66.28 German square miles, or nearly 1,425 British square miles.

History.] The Ernestian line—as we have already related—after John Frederic had been compelled to resign the greater part of his lands to Maurice, was continued by his sons, but divided into several branches.

The late grand duke, who died in June, 1828, was an excellent and able man, who took much pleasure in protecting and advancing the arts and sciences, and was the personal friend of Goethe, and many others of the most distinguished men in Germany. He gave a constitution to his dominions in 1816, by which he established equality of rights among the citizens, the freedom of the press, and an elective representation of one chamber. He was succeeded by his son.

Physical Features.] The greater part of this country lies in Thuringia, and presents the same physical features. The principal rivers are the Saale and the Werra. The soil is of various qualities, but agriculture is skilfully conducted. Wood forms the staple riches of the country.

Population.] The population is stated by Hassel at 192,371. Stein's calculation of 216,000, or Balbi's of 222,000, in 1826, we believe to be much nearer the truth. About 184,200 are Lutherans; the Catholics exceed 10,000. All Christian confessions enjoy equal rights. Establishments for education are well-conducted, and there is one university, and several scientific institutions. Indeed, more has been done in this small country for the advancement of the arts and sciences, than in any other country of Europe, comparatively speaking. There was a time when the four most distinguished living poets of Germany, Goethe, Schiller, Wieland, and Herder, besides Musaeus and several other illustrious scholars lived at Weimar, and shed a glory on the court of the grand duke, far eclipsing that which nobility alone can confer.

Government.] The succession goes in the male line. The grand duke holds the 12th place in the confederacy, with one vote *in plenum.* The revenue in 1826 was 4,913,000 francs, or £204,380 : 4 : 2*d.*, according to Balbi, and the debt 16,291,000 francs, or £688,795 : 3 : 4*d.* The military force, according to the act of confederacy, is fixed at 2,100; but not to burden the country, there is no standing army except a small corps of hussars, and a staff, under which the militia, who are always kept in readiness, can be organized in case of need.

Topography.] The grand duchy is divided into the two principalities of Weimar and Eisenach, containing 30 towns, 6 boroughs, and 386 hamlets. Weimar, the capital of the grand duchy, contains 10,000 inhabitants. It lies 60 miles S.W. of Leipzig, in a fertile valley watered by the Ilm. A drawing academy was established here in 1778. The theatre is considered one of the best in Germany. The cathedral contains some fine paintings by Lucas Kranach, who is buried here; and here also is the tomb of the illustrious Schiller. The public library contains 95,000 volumes. Under the auspices of the duchess of Weimar, this little capital—as Madame de Stael remarks—was changed into a seat of knowledge and elegance; the most refined society in Germany was assembled in her palace; and even Napoleon himself, in the full intoxication of victory, was compelled to respect her.

Jena is a considerable town, walled and well-built, 12 miles E. of Weimar, on the Saale, with large suburbs, in a pleasant valley bounded by hills. It contains a ducal palace, two literary societies, an university, and 4,800 inhabitants. The university was founded in 1548, by the sons of the unfortunate Frederic, who lost his electoral dominions in consequence of the fatal battle of Muhlberg. The noble founders of this academy, having designed it as a bulwark for the Protestant religion—of which to their honour they were the great political supporters—took care to furnish it with able, learned, and pious professors. The divines

of Jena have proved themselves eminent pillars of the Lutheran church, as Matthew Vlack Illyric, Solomon Glassius, the famous oriental philologist, the pious and the learned Gerhard, John Francis Budde, and John George Walch. In the days of its glory, it could boast of more than 4000 students. But it sadly degenerated towards the middle of the 18th century, when through the relaxation of discipline, the students were more famous for fighting and drinking than for studying. In 1783, the students did not exceed 600. But these disorders have been lately cured; and the university, under the auspices of the late famous Griesbach, and professor Eichorn, resumed much of its former celebrity. It has now 56 professors.—Eisenach, with 8,258 inhabitants, possesses several manufactures. On the highest mountain, near the town, lies the Wurtburg, once the residence of the landgraves of Thuringia,—celebrated for an assembly of Minnesingers, who here contended for the palm of poetry,—afterwards by Luther's residence,—and latterly by an assembly of students, who met here on the 18th of October, 1817, to celebrate the anniversary of the Reformation, and the battle of Leipzig. This festivity, however, though patronized by the duke himself, excited the displeasure of the holy allies. Perhaps the high-wrought feelings of the young men had found expression in intemperate, or at least unguarded language; but the head and front of their offending seems to have been a sort of political *auto da fe*, which in the moment of their enthusiasm they made of certain books and writings, which they thought militated against rational freedom.

CHAP. XIX.—THE DUCHY OF SACHSEN-GOTHA.

THE duke of Sachsen-Gotha, who holds the 12th place in the confederacy, was the chief of the 2d branch of the Ernestine line. His possessions are the two principalities of Gotha and Altenburg, lying in Thuringia. They are quite separated; the western part, or the principality of Gotha, is surrounded by Prussia, Schwarzburg, Weimar, Hessen-Cassel, and Meiningen; the eastern part, or the principality of Altenburg, lies, divided into two districts, between Prussia, royal Saxony, Reuss, Weimar, Schwarzburg, and Coburg. The surface is nearly 1,100 British square miles. The population is about 193,000. The majority are of the Lutheran creed, and about 10,000 are of Wendish descent. The country is mountainous, being partly covered by the Thuringian forest. The rivers of the country belong to the basins of the Weser and Elbe, the principal are the Unstrut, the Saale, and the Pleisse.

Government.] There was a kind of representative constitution in Sachsen-Gotha, which has been preserved with some alterations. The succession was in the male line; but the duke Frederic IV. died in 1825, and with him this branch of the Ernestine line was extinguished, and the country has been since administrated under the name of Meiningen, Coburg, and Hildburghausen, till some difficulties about the succession of these side-lines are decided. The revenue is said to be 2,457,000 francs, and the debt 7,000,000 francs. The military force is about 1,960. The militia can be brought to 28,784. Gotha, the chief town, contains 13,000 inhabitants. The public library contains 60,000 volumes, and 2000 MSS.; and the private library of the duke 20,000 volumes.—Altenburg, the capital of the principality of that name, has 10,160 inhabitants, and conducts some manufactures.

CHAP. XX.—THE DUCHY OF SACHSEN-MEININGEN.

The western part of this duchy is surrounded by Eisenach, Gotha, Hessen-Cassel, Prussia, Coburg, Hildburghausen, and Bavaria. The eastern part by Coburg, Hildburghausen, Schwarzburg, and Bavaria. The surface is mountainous; the principal river is the Werra. Agriculture is in a good state, and there are some manufactures. The inhabitants are almost all Lutherans, with the exception of about 700 Jews. The establishments for instruction are good, and a representative constitution was given in 1824. The duke holds the 12th place in the confederacy, together with other princes of the Ernestine line, but has one vote *in plenum*. The revenue is said to be about 350,000 florins. There is no regular military, but only a small body guard, and a militia; the contingent for the confederacy is 540 men. Meiningen, or Meinenegen, is the capital. It lies on the Werra, and has 4,200 inhabitants, with a public library of 24,000 volumes.—Sonnenberg, in a narrow valley, is famous for the Sonnenberg ware, consisting of organs, children's violins, and toys of wood and pasteboard. At the village of Limbach, there is an extensive manufacture of china, employing more than 100 persons.

CHAP. XXI.—THE DUCHY OF SACHSEN-HILDBURGHAUSEN

The principal part of this duchy is surrounded on the N. by Weimar and Schwarzburg; on the E. by Meiningen and Coburg; on the S. and S.W. by Bavaria; on the W. by Meiningen; and on the N.W. by Prussia. The country is mountainous, lying in and upon the Thuringian forest. The principal river is the Werra. Agriculture is the principal occupation, and some wine is grown. Wood is a staple ware. The establishments for education are particularly good. The duke holds the 12th place in the confederacy with the other Ernestine princes, and has one vote *in plenum*. A constitution was granted in 1815. The revenue is reckoned to be 200,000 florins. There is no regular military force; but the contingent is 297 men.—Hildburghausen, the capital, lies on the Werra, and has 3,529 inhabitants. There is a fine castle here, the residence of the duke.—Lindenau, with 347 inhabitants, has considerable salt-works.

CHAP. XXII.—THE DUCHY OF SACHSEN-COBURG-SAALFELD.

This duchy consists of the ancient duchy of Coburg, and the principality of Lichtenberg, acquired in 1815. The former lies between Thuringia and Franconia. The principal part of Coburg is bounded on the N.W. by Hildburghausen; on the N.E. by Meiningen; on the E. by Bavaria and Hildburghausen; on the S.E. by Bavaria; on the S.W. by Bavaria; and on the W. by Hildburghausen.—The new possession of Lichtenberg is bounded on the N. by Hessen-Homburg; on the E. by Bavaria; on the S. by the Prussian dominions; and on the E. by the principality of Birkenfeld. The territorial surface is estimated by one geographer at 23, and by another at 29 German square miles, of which 11.28 belong to Lichtenbergh. The principality of Coburg is a large valley, through which the

Itz runs; the mountains are those of the Thuringian forest. The principality of Lichtenberg is a narrow valley, watered by the Blies. The mountains belong to the chain of the Wasgau. Coburg has a very mild and pleasant climate; that of Lichtenberg is rather severe. The establishments for education are good. A constitution was given in 1816, and improved in 1821. The duke holds the 12th place in the confederacy with the other princes of his house, and has one vote *in plenum*. The revenue may be 600,000 florins, or £67,500. The standing force is 250 men, and the contingent 800.—Coburg, the capital, is built on the Itz, in a pleasant country. The population is nearly 9000. There is a fine castle, the residence of the duke, with a library of 25,000 volumes.—Saalfeld, on the Saale, contains some manufactories, and an iron mine.—St. Wende, the chief town of the principality of Lichtenberg, has 1,983 inhabitants, and conducts some manufactures, particularly that of linen.

CHAP. XXIII.—THE DUCHY OF BRUNSWICK.

THE duchy of Brunswick, or Braunschweig, consists of five large, and several small districts. It is wholly enclosed by the Prussian and Hanoverian States. Its surface is variously stated, from 1,126 geographical, to 1,452 British square miles. In 1826, the population amounted to 242,000. The possessions of the reigning house of Brunswick were conquered many centuries ago. They were allodial property of the house of Guelph and Este; being afterwards enlarged, the whole principality was consolidated in 1495. The country was taken possession of by Napoleon, after the battle of Jena, in 1809, in which engagement the duke commanded the Prussian army, and was severely wounded. The duchy was incorporated with the kingdom of Westphalia; but the son of the duke, who had retired to England, got possession of it again in 1813. He fell in the affair of Quatre Bras in 1815. His son being a minor, the present king of Great Britain, then Prince Regent, instituted a regency under his own inspection, and on the 19th of June, 1820, gave a representative constitution.—The Harz runs through a part of the country. The principal river is the Weser. Agriculture is in a flourishing state, and there is also considerable industry. The population is mostly Lutheran. The duchy of Brunswick has always held an honourable place in German literature. The duke holds the 13th place in the confederacy, together with Nassau, and has two votes *in plenum*. The revenue of the state in 1826 amounted to 6,300,000 francs, or £254,166 : 13 : 4*d.*; but the patrimonial domains of the duke are said to yield him £210,000 annually. The state debt was, in 1826, 8,000,000 francs, or £333,333 : 6 : 8*d.* The military force is 15,000 men; the contingent for the confederacy is fixed at 2,009.—Brunswick, the capital, and ducal residence, is an ancient well-built fortified city, situated in a plain on the Ocker, where it is navigable 8 miles below Wolfenbüttel, and 40 miles E. of Hanover. It contains a magnificent palace, a college founded in 1745, a cathedral, erected in 1172, an opera house, a theatre, an orphan house, two gymnasiums, a house of correction, other public buildings, and about 36,000 inhabitants. It was formerly a Hanse town, and has two celebrated yearly fairs. The first spinning-wheels were invented in this place, in 1530.—Wolfenbüttel is a well-built, and tolerably fortified town, containing 8000 inhabitants. In the castle is a magnificent library of 200,000 volumes. This immense library was collected by duke Au-

gustus, a learned, pious, and excellent prince, who died in 1666, at the advanced age of 88. The principal church in the town contains the sepulchral monuments of the dukes; 25 of whom, with their duchesses, lie here enclosed in leaden coffins, with suitable inscriptions. Three miles from Wolfenbüttel is an elegant chateau, in which are two galleries furnished with excellent paintings. One of these is 200 feet long, 50 feet broad, and 47 feet high; and the other 160 feet long, and 20 broad.—Helmstadt is an indifferently built town with two suburbs, containing 5,300 inhabitants. It is one of the oldest cities in Germany; and is so called from the number of elm-trees in its vicinity. A university was founded here in 1576, by duke Juliers. For a long time, it maintained an illustrious reputation for the number of learned characters that it produced, and the celebrity of its professors, as Lampadius, Forsterus, Stukius, Reinneccius, Meibomius, Calixtus, Conringius, and Cellarius, whose erudite work on ancient geography was long esteemed a standard performance in that branch of science. But the university has now sunk into a state of comparative insignificance.

CHAP. XXIV.—THE GRAND DUCHY OF MECKLENBURG-SCHWERIN.

This country has a surface of above 5000 British square miles. It is bounded on the N. by the Baltic; on the E. by the Prussian States; on the S.E. by Mecklenburg-Strelitz; on the S. by Prussian Saxony; on the S.W. by Hanover; and on the W. by Luneburg, and the principality of Ratzeburg, belonging to Mecklenburg-Strelitz.

History.] The history of Mecklenburg is only known with any certainty from the time of Charlemagne. Herulians and Wendes inhabited the coasts of the Baltic, and the present duchy of Mecklenburg, in the earliest ages. These tribes having followed the general emigration towards the South, were succeeded by Slavonians coming from the East. Between two of the most powerful of these tribes, the Obotrites and the Wilzes, an ancient feud existed. The Obotrites, who, in the time of Charlemagne, consisted of the Obotrites properly so called, in the west of Mecklenburg,—the Polabes, in Ratzeburg and Lauenburg,—and the Wagrians, in Holstein, conquered the Wilzes in East Mecklenburg in 782, and took possession of a large part of that country. The conversion and subjection of the Slavonian tribes occasioned long and bloody wars. Henry the Lion, duke of Saxony and Bavaria, at length conquered these fierce tribes, and devastated their country with fire and sword. Henry afterwards made peace with the Wendish prince, Pribislaus, who embraced the Christian faith; and whose son, Henry Burewin, received Henry's daughter, Mathilda, in marriage. In 1170, Pribislaus was declared a prince of the empire. This chief was the ancestor of the succeeding princes of Mecklenburg, whose house is the oldest princely house in Europe, and the only one whose Slavonian descent is indisputable. The name of Mecklenburg comes from the ancient capital of the Obotrites, *Mecklinborg*, which was destroyed in early times, and is now a village between Wismar and Brüel. After the death of Henry Burewin II. the sovereignty was divided between the four lines of Mecklenburg, Gustrow, Rostock, and Parchim; but the two latter became extinct soon after. John, surnamed Theologus, to whom Mecklenburg was given, was created doc-

tor of theology by the University of Paris. His grandson, Henry the Lion, greatly enlarged his patrimonial territories. His sons, Albrecht and John, founded the two lines of Stargard and Schwerin, and were created dukes by the emperor Charles IV., 1340. Both lines were again united under Henry the Fat; and his two grandsons, Adolph Frederic and John Albert, founded the lines of Schwerin and Gustrow. Ferdinand III. on account of their alliance with Denmark, deposed both, and bestowed the country, in 1627, on this celebrated Wallenstein; but in 1632, Gustavus Adolphus of Sweden restored them. The Schwerin line was afterwards divided into the two branches of Schwerin and Strelitz, while that of Gustrow became extinct in 1695. The present grand duke of Mecklenburg-Schwerin, Frederic Francis, joined the Rhenish confederation, and afterwards, in the congress of Vienna, the German confederacy. The ancient very superannuated and defective constitution still exists. Between both grand duchies, a very close connexion exists, as the States of both assemble together, though the governments are independent of one another. Bondage has at last been abolished, and the present duke has made improvements in the administration.

Physical Features.] This country is entirely a plain, interspersed with very small hills. The coast towards the Baltic is little indented. There are here no perceptible tides, and the shore is protected by extensive downs of sand. The *holy dyke*, at the coast of Dobberaa, is about two English miles in length, 100 feet broad, and 15 or 16 feet high. It consists entirely of small loose pebbles.

Rivers.] The principal river is the Elbe; the smaller ones are the Elde, the Reiknitz, and the Peene. There are a great number of inland lakes; the Sea of Dassow, although connected with the Baltic, is properly only an inland lake.

Soil, Climate, &c.] The soil is partly rich, and intermixed with clay, partly sandy. The climate is temperate, but very variable, and the winter severe. Agriculture is the principal branch of industry, and there are few provinces in Germany where it is so well conducted. The country exports a considerable quantity of corn. Apples are likewise exported in great quantities. The rearing of cattle is extensively conducted. The sheep have been greatly improved by crossing with Merinos. Mecklenburg excels all other countries of Germany in the rearing of horses, which are exported from the province in great numbers to the Continent. In several extensive studs, the original Mecklenburg breed, which in itself is good, has been improved by English full-blood and Arabian horses. The commerce is very animated, and the balance between exportation and importation stands in favour of the country.

Population.] The population was estimated by Hassel, in 1817, at 351,908; and at a later date by Stein, at 396,874. Balbi states it to have been, in 1826, 431,000. It is composed chiefly of the descendants of the Obotrites, and the language is Low German. The majority are Lutherans; the Catholics do not exceed 1000, but the Jews amount to nearly 3000. There is a university, and several pretty good gymnasiums and high schools; but the lower classes are very much behind those of other German countries in information. The grand duke of Mecklenburg-Schwerin holds, together with Mecklenburg-Strelitz, the 14th place in the German confederacy, and has, *in plenum*, two votes. The succession goes in the male line. The revenue, in 1826, was about 6,000,000 francs, or £250,000, and the debt 24,500,000 francs, or

£1,020,833 : 6 : 8*d.* The military force is about 3,400, the contingent is 3,580.

Chief Towns.] The capital is Schwerin. It lies partly on an island in the lake, and has 12,000 inhabitants. The duke only resides here a few weeks in winter.—Dobberan borough, near the Baltic, with 1,420 inhabitants, is a celebrated sea-bathing place, having annually from 600 to 1000 visitors, with very splendid accommodation, and fine promenades. Here is an ancient Gothic church.—Ludwigslust, a borough with about 4000 inhabitants; is the usual residence of the duke. There is here a very fine castle, with a gallery of pictures, and a beautiful park. Wismar, on the Baltic, with 9000 inhabitants; has a good harbour, and conducts a considerable commerce.—Rostock, on the Warnow, which is navigable, is the most important Mecklenburg town. It contains 17,000 inhabitants, and has a very animated yearly fair. Its university was founded in 1419. It is from Warnemunde, a port on the Baltic, that the commerce of Rostock is carried on.—At Ivenack, a borough with 750 inhabitants, the most famous stud in all Germany is kept. It belongs to the Count of Plessen. The horses here are almost all of English or Arabian breed, and fetch high prices over all the Continent.

CHAP. XXV.—THE GRAND DUCHY OF MECKLENBURG-STRELITZ.

The surface of this duchy is about 640 English square miles. It consists of two different districts, viz. 1*st,* The principality of Stargard, bounded on the N.E. and S. by the Prussian territories, and on the W. by Mecklenburg-Schwerin; and, 2*d,* The principality of Ratzeburg, bounded on the N. by the lake of Dassow, on the E. by Schwerin, on on the S. by Lauenburg, and on the W. by the lake of Ratzeburg, and the dominions of the town of Lübeck.

History.] The father of the present grand duke, the duke Charles, joined the Rhenish confederacy at the same time with the duke of Mecklenburg-Schwerin, and afterwards the German confederacy, when he took the title of grand duke. His sister was the queen Charlotte of England, wife of George III., and his daughter is married to the duke of Cumberland. He was succeeded by his son George Frederic, in 1816.

Physical Features.] This country is a perfect plain, intersected with forests, lakes, and rivers. The principal river is the Tollen, coming from the lake of the same name. The climate is like that of Schwerin, but the soil is in general lighter.

Population.] The inhabitants, amounting in 1826 to 77,000, are chiefly of Wendish descent, and the Low German is here also the dialect of the lower classes. The religion is Lutheran, and there are about 732 Jews. The government and constitution are the same as in Schwerin. The revenue is about £45,000, and the state debt about £125,000. The contingent is 717 men.

Chief Towns.] New Strelitz, with about 5000 inhabitants, is the capital and residence of the grand duke; it is very regularly and well-built, and has a fine castle belonging to the duke, in which is a collection of Obotriton and Wendish antiquities.—New Brandenburg, on the Tollensee, has 5,145 inhabitants.

CHAP. XXVI.—THE GRAND DUCHY OF HOLSTEIN-OLDENBURG.

The possessions of the grand duke of Oldenburg consist of three distinct countries, viz. 1*st*, The duchy of Oldenburg, bounded on the N. by the German Ocean: on the E. by Hanover, and the dominions of the town of Bremen; and on the S. and W. by Hanover; 2*d*, The principality of Lübeck, entirely enclosed in the Danish dukedom of Holstein; and, 3*dly*, The principality of Birkenfeld, on the left side of the Rhine, almost surrounded by the Prussian province of the Lower Rhine. The surface of the whole possessions of the duke amount to 123¾ German square miles, according to Stein, and to 129, according to Hassel. It is probable they do not exceed 2,600 British square miles.

History.] This principality originally belonged to the house of Denmark; but in 1773, was exchanged with the grand duke of Russia, the late emperor Paul, for the district of Kiel, in Holstein, who immediately gave it to his cousin, the duke of Holstein-Eutin, and bishop of Lubeck. This exchange was ratified by the emperor of Germany, who, in 1777, raised Oldenburg and Delmenhurst to the rank of a duchy, by the name of Holstein-Oldenburg. The late duke, Peter Frederic Ludwig, was bishop of Lübeck, but administered the affairs of the duchy since 1785 for his cousin, who was mad, and whom he succeeded in 1803; he joined the Rhenish confederation in 1808, but his duchy was, in 1810 incorporated with the French empire. An indemnity was offered to the duke, which that high-minded man would not accept, being too much attached to his country to make it the subject of barter. He kept the principality of Lübeck, and was, by the congress of Vienna, reinstated in his duchy, to which was added the principality of Birkenfeld above-mentioned. A representative constitution has not yet been introduced into this country.

Physical Features.] Oldenburg is a marshy tract, subject to frequent inundations, especially from the Weser, but abounding in rich pastures. A considerable part of it is moorish and barren; other parts are very fertile. Oldenburg possesses an excellent breed of horned cattle, and is noted for fine horses. The principality of Lubeck has the same climate and soil as Holstein. The country is very pretty and fertile around the lakes of Ploen and Eutin. The principality of Birkenfeld is covered with mountains belonging to the system of the Wasgau, between which are small valleys.

Population, Government, &c.] The population of this duchy has been estimated so high as 325,000, and so low as 218,000; we think Balbi's statement more correct, which makes the population to have been, in 1826, 241,000. In Oldenburg and Lübeck, the inhabitants are of the Low German race, and mostly Lutherans by creed; in Birkenfeld—the population of which does not exceed 22,000—they are of the Rhenish German race. The duke holds, together with Anhalt and Schwarzburg, the 15th place in the confederacy, with one vote *in plenum*. The succession is in the male line, and the administration of the country is said to be very good. Education is here much neglected. Parochial schools are difficult to maintain, in consequence of the thinness of the population; they have, however, been considerably improved. The revenue, in 1826, amounted to 3,878,000 francs, or £160,625. The military

force amounts to 1,650 men, but the contingent is 2,177 men. There are few manufactures in Oldenburg and Lubeck; but there are some in Birkenfeld, a barren country, whose inhabitants are necessitated to support themselves in this way.

Topography.] There are nine towns, 10 boroughs, and 776 hamlets in this country. The principal towns are in the duchy of Oldenburg. The capital of the same name contains a population of 6000 inhabitants. It is situated on the Hunte.—Elsfleth, with 1,562 inhabitants, is situated upon the junction of the Hunte and the Weser; and a considerable revenue is drawn here from the toll which ships are obliged to pay.—Eutin, in the principality of Lübeck, is a neat little town, with about 3000 inhabitants.—The town of Birkenfeld has 1,061 inhabitants.

Lordship of Kniephausen.] Enclosed between East Friesland, Jena, and Oldenburg, lies the lordship of Kniephausen, a small territory of about 30 British square miles, with 2,820 inhabitants. This district formerly formed an immediate state of the empire, belonging to the count of Bentink; but in 1810, it was incorporated with France. In 1813, the count, who had been accused of favouring the allies, was conducted as a prisoner to Paris; and on his return, after the battle of Leipsic, he found his country occupied by Russian troops, who had taken possession of it, in the name of Russia, for the duke of Oldenburg, the brother-in-law of the czar. The count protested against this measure, and the affair remained undecided at the congress of Vienna. We believe the duke of Oldenburg still retains the administration of this little territory.

CHAP. XXVII.—THE DUCHY OF NASSAU.

THE duchy of Nassau takes its name from an ancient castle, of which the ruins are still visible on a mountain near the town of Nassau. It lies in the middle of Germany, and is bounded on the N.W. and N. by the Prussian dominions; on the N.E. by the grand duchy of Hessen, which encloses the district of Reichelsheim belonging to this duchy; on the E. by the Prussian dominions, Hessen, and Hessen-Homburg; on the S.E. by the territory of Frankfort; and on the W. by the Prussian dominions. The surface has been given by one geographer at 101, and by another at 106 German square miles; but according to the best maps, it cannot exceed 91 German, or 1,960 British square miles.

History.] The founder of the reigning family of Nassau, Otto of Lauenburg, brother of king Conrad I., appears in history in the 10th century. Among his successors, Walram the I., who died in 1020, founded two reigning lines. The elder Walram II. continued the line of Lauenburg, which afterwards took the name of Nassau from the above-mentioned castle; the younger son Otto married the heiress of Gueldres, and founded the line of Nassau-Gueldres, which was extinguished in 1523. In 1255, the country was again partitioned between the sons of Henry II.; Walram the elder took the southern, and Otto the younger the northern countries. Both these lines are still flourishing. Walram's son, Adolphus, was elected German emperor in 1292, and lost his life, in 1298, in battle against Albrecht of Austria. After his death, several divisions again took place; but in 1605, Count Ludwig II. united all the country under one chief. His sons founded the three lines of Saarbrück, Isbrin, and Weilburg. The latter has united, since 1810, all the

possessions of the line of Walram. The Rhenish confederacy, into which he entered in 1806, procured to the prince of Nassau an increase of territory, and the title of a duke. He afterwards joined the German confederacy, by which he obtained a new augmentation of territory. The predecessor of the present duke William, gave a new constitution to the country in 1814. The younger line began with the above-mentioned Count Otto; but only became remarkable in history in the 16th century, with the celebrated count of Nassau-Orange, who bore so important a part in the revolution of the Netherlands. But we shall relate the history of this line—to which the present king of the Netherlands, and William, king of England belong—in our history of the Netherlands.

Physical Features.] The surface of this country is partly mountainous, and partly intersected with hills. Two systems of mountains run into this country. On the N. the Westerwald, and on the S.E. the Höhe, or Taunus, which rises, on the boundaries of Hessen in the Feldberg, to an elevation of 2,605 feet, and then sinks towards the Rhine. The principal river is "the lovely Rhine," which here waters the most beautiful of all German valleys, the Rhinegau. The other rivers are the Mayne or Main, the Lahn, the Niester, and the Sambach. There are no lakes, but a number of mineral springs, of which several are highly celebrated.

Climate and Productions.] The climate is mild and pleasant, particularly in the south. A part of the country is very fertile; but in some districts the soil is not productive, though agriculture is well-conducted. Fruit is grown in great quantity, and exported; but the principal production of the country is wine, and it is here that the best Rhine wines are produced. There are also extensive forests. The rearing of cattle is another very productive branch of industry. Mining is important in some districts which produce iron, lead, and silver ore. The manufactures are insignificant; and although the situation of the country is favourable for commerce, there is no commercial town in the territory.

Population, Revenue, &c.] The population of Nassau was returned to the assembly of the confederacy in 1817, at 302,769. Stein states it at 316,787, and Balbi estimates it to have been, in 1826, 337,000. The Lutherans and Calvinists are here united under the name of the Evangelical Church; but the Catholics, of whom there are 9000, enjoy equal political rights. The establishments for education are numerous, and carefully organized and inspected.—The revenue is stated by Hassel to amount to 1,557,781 florins. Stein says 1,800,000 florins, and the debt 6,000,000 of florins. Balbi makes the revenue, in 1826, to have been about £250,000, and the debt £448,000. The military force is about 2,800, and the contingent for the confederacy 3,028. The duke holds the 13th place in the German confederacy with Brunswick, and has two votes *in plenum.*

Topography.] The duchy is divided into 28 bailiwicks. Wiesbaden, the capital, with 7000 inhabitants, lies in a charming situation, and has 14 warm springs, among which there is one of the temperature of boiling water. There are excellent establishments for bathing at this town, which are, during some seasons, visited by several thousand strangers.—Diez, on the Lahn, with 2,089 inhabitants, is celebrated for its nurseries, in which are grown above 700 species of apples, 300 species of pears, and 100 of prunes.—Fachingen, with 446 inhabitants, has a mineral spring, from which about 200,000 bottles of water are exported every year.—Niederselters, with 822 inhabitants, possesses a celebrated mineral spring,

of which the water is sent all over Europe, to the extent of 2½ millions of bottles.—At the little village of Johannesberg, on a high mountain at a little distance from the Rhine, the best of all Rhenish wine is grown. The vineyard which yields this wine was first planted by the monks of the abbey of Johannesberg, about the end of the 11th century. The grapes are gathered as late as possible. The choicest produce is called *Schoss Johannesberger*, and is indebted for its celebrity to its high flavour and perfume, and the almost total absence of acidity. Formerly, the best exposures of the hill were the property of the bishop of Fulda, and it was only by favour that a few bottles of the prime vintages could be obtained from his lordship's cellars. On the secularization of the ecclesiastical States, the Prince of Orange became the possessor of the domain; and latterly, it has been transferred to Prince von Metternich.—Next to *Johannesberger* may be ranked the produce of the Steinberg vineyard, which belonged to the suppressed monastery of Eberbach, and is now the property of the duke of Nassau. It is the strongest of all the Rhine wines, and in favourable years has much sweetness and delicacy of flavour. That of 1811 has been sold on the spot as high as five and a half florins, or about 12*s.* the bottle. The quantity annually made is about 300 hogsheads, of which 60 are of first-rate quality. Some persons, however, give the preference to the Rudesheimer wine, which is manufactured at the little village of Rudesheim opposite to Bingen. The Orleans grape is here chiefly cultivated, the wine from which combines a high flavour, with much body, and is freer from acidity than most of the other growths of the Rhine. The *Rudesheim Hinterhauser*, so called from its growing immediately behind the houses of the village, and the *Rudesheimer Berg*, or Mountain wine, approach in excellence to the first rate *Johannesberger*. The vineyard of Grafenberg, an appendage of the wealthy convent of Eberbach, is distinguished by its choice growths. The *Hochheimer* is, strictly speaking, a Mayne wine. Its name, corrupted into *Hock*, is employed in this country to designate the first-growths of the Rhine. The abundant produce of the surrounding lands frequently passes in this, as in many other cases, for the first rate.[64]

CHAP. XXVIII.—THE DUCHY OF ANHALT-DESSAU.

This country consists of several detached districts. The largest connected tract stretches on the left banks of the Elbe, and on both sides of the Mulde. The superficial extent is about 360 square miles, and the population, which was returned to the confederacy in 1817 at 52,947, is now nearly 57,000, chiefly Calvinists and Lutherans.

History.] The house of Anhalt derives its origin from a count Esiko, who, in the 11th century, possessed the castle of Ballenstadt, and the surrounding country. His descendants acquired considerable possessions between the Elbe and Saale, which were greatly increased by count Otto, who married the heiress of duke Magnus of Saxony; his son,

[64] The Rhenish wines, when old and good, are very dear, even on the spot where they are produced. In 1817, the Rhine wines at Mentz were at from 150 to 500, and 700 florins for the cask of 38 gallons. When the wine is kept old in bottle, its value is greatly enhanced. The price of the older vintages is proportionably increased. That of 1794, was from 4*s.* 6*d.* to 12*s.* per bottle. That of 1783, from 6*s.* to 14*s.*, and 1726, from 14*s.* to 16*s.* per bottle. The old Stein wine, from 10*s.* to 16*s.*, and to those prices we have to add the duty, and all the other charges of bringing them into this country.

Albert the Bear, possessed Lusatia, Brandenburg, and a part of Thuringia, all which he divided amongst his seven sons, one of whom, Bernhard, was the ancestor of the present dukes of Anhalt. The house divided in 1686 into the four branches of Dessau, Bernburg, Kothen, and Zerbst, of which the latter became extinct in 1793; the three others are still existing.—The prince of this little district is almost an unlimited sovereign. The *Landstande* is only summoned when it is agreeable to the prince. The revenue is said to amount to 710,000 florins, and Balbi states it to have been, in 1826, about £76,000, and the debt £85,208 : 6 : 8*d*. The contingent to the army of the confederacy is 529 men.

Physical Features.] Anhalt-Dessau is a perfect plain. The principal river is the Elbe, into which the Mulde flows. There are several small lakes. The territory on the left banks of the Elbe is as finely cultivated as a garden, and the rearing of cattle forms an extensive branch of industry; but there is little or no commerce.—Dessau on the Mulde, with a population of 10,000 souls, of whom 900 are Jews, is the capital.—Zerbst on the Elbe, a town of 7,300 inhabitants, is remarkable as having been the birth place of Catherine II. empress of Russia.

CHAP. XXIX.—THE DUCHY OF ANHALT-BERNBURG.

The possessions of the duke of Anhalt-Bernburg lie dispersed between the Harz, and on the Saale and Elbe. They amount to about 330 British square miles. That part of the dukedom which borders on the Harz is intersected with several fine valleys. In the neighbourhood of the rivers the land is fertile; the mountains produce wood and metal, particularly iron. There are few manufactures, except the iron-smelting works. The population now amounts to about 38,500, among whom are 400 Jews. The religious sects are Calvinists and Lutherans. The schools are very well-regulated. The revenue is estimated at £48,536 : 8*s*. and the debt at about £85,000. The contingent for the confederacy is 370 men; but there are not above 120 in active service. Bernburg, on the Saale, with 5,400 inhabitants, is the capital.—In the neighbourhood of Wilhelmhof, a farm belonging to the duke, are the ruins of the ancient castle of Anhalt, built by count Esiko of Ballenstadt in 906.

CHAP. XXX.—THE DUCHY OF ANHALT-KOTHEN.

This duchy, comprising about 300 British square miles, consists of four discontiguous districts, lying on the left and right banks of the Elbe, and bounded by the Prussian states, Anhalt-Bernburg, and Anhalt-Dessau. It is a level country, with the exception of one district, in which a few sand-hills occur. The climate is temperate, and the soil fertile. The population now amounts to 34,000 souls: the revenue is about £35,000, and the debt about £125,000. The contingent is 324 men.—Köthen on the Zittau, with a population of 5,600 souls, is the chief town.

CHAP. XXXI.—THE PRINCIPALITY OF SCHWARZBURG-SONDERSHAUSEN.

The county of Schwarzburg is divided into two parts, of which the two houses of Sondershausen and Rudolstadt possess different parts. The upper part, belonging to Sondershausen, lies on the Thuringian forest, and is bounded on the N. by the Prussian, Weimar, and Gotha territories; on the E. by Coburg; on the S.E. by Meiningen; on the S.W. by Hildburghausen; and on the W. by Weimar and Gotha. Some insulated districts lie towards the N.E. The lower part lies quite enclosed in the Prussian province of Saxony. The surface of the whole is about 390 British square miles. The ancient house of Schwarzburg possessed in the 11th century considerable estates in Thuringia. A count Gunther of Schwarzburg, was in 1349 elected German emperor. His elder brother Henry kept the county, and from him descends the present line. Gunther XL. introduced in 1541 the Lutheran religion into his country. His sons founded in 1552 the two reigning lines of Sondershausen and Rudolstadt, who obtained in 1697 and 1710 the princely dignity. In April, 1807, they entered the Rhenish confederacy, and in 1815 the German confederacy, in which both together hold with Anhalt and Oldenburg the fifteenth place, but have each one vote *in plenum*. The surface of the upper part of this county is very mountainous, the lower part is less so. The principal rivers of the upper part are the Gera and the Ilm; in the lower part are the Helbe and the Wipper. Agriculture is the principal branch of industry; but there are no manufactures of any extent. In 1817, the population was 45,120; it now amounts to 48,000, all of whom are Lutherans, except a few Catholics. The revenue is about 200,000 florins. There is no regular military. The contingent is fixed at 451 men. Sondershausen, the capital, and residence of the prince, contains 3,400 inhabitants. Near this town is the village of Guntherstädt, with a sulphurous spring, and bathing establishment.

CHAP. XXXII.—THE PRINCIPALITY OF SCHWARZBURG-RUDOLSTADT.

This principality contains about 450 British square miles. It lies, like Sondershausen, in the upper and lower part of the country of Schwarzburg. The upper part belongs to the Thuringian forest, and is very mountainous; the lower has only moderate hills. The principal rivers of the upper part are the Saale, the Schwarza, and the Ilm. In the lower part are the Great and Small Wipper, and the Rotter. The soil is not fertile, but agriculture is conducted with great skill; there is also some mining. In 1817, there were 53,940 inhabitants. They now amount to 57,000, most of whom are Lutherans. A constitution was granted by the present prince Gunther in 1816. The revenue is about 260,000 florins: Balbi says 840,000 francs. There is no military, except a small body-guard, and militia. The contingent is 539 men. Rudolstadt, on the Saale, the capital, and residence of the prince, contains 4,500 inhabitants: Balbi says 3000. Near the village of Schwarzburg, on a steep rock, is the old romantic castle of Schwarzburg, the family-seat of the princes of Schwarzburg.

CHAP. XXXIII.—THE PRINCIPALITY OF HOHENZOLLERN-HECHINGEN.

THIS country takes its name from the ancient castle of Hohenzollern. It is bounded on the N. and S. by Wirtemberg; and on the E. and W. by Sigmaringen. The surface is about 100 British square miles. The princes of Hohenzollern, descend from the counts of Zollern, who are also the ancestors of the royal house of Prussia. At the end of the 16th century, they divided into the two lines of Hechingen and Sigmaringen, which still exist. This little country forms a part of the Suabian Alb. The population now amounts to 15,000, the majority of whom are Catholics. The establishments for education are in the hands of the clergy. The prince is absolute sovereign. The revenue amounts to 120,000 florins. The contingent is 145 men. The prince holds, together with Sigmaringen, Lichtenstein, the two lines of Reuss, the two of Lippe, and that of Waldeck, the sixteenth place in the confederacy, and has one vote *in plenum*. Hechingen, with 3000 inhabitants, is the capital, and residence of the prince.

CHAP. XXXIV.—THE PRINCIPALITY OF HOHENZOLLERN-SIGMARINGEN.

THIS principality is bounded on the N. and E. and W. by Wirtemberg; and on the S. by Baden. Its superficial extent is about 400 British square miles. It lies at the foot, and on the Suabian Alb. The soil is stony; but some fertile tracts extend on the right banks of the Danube, which is the principal river. Agriculture has been of late greatly improved, and in spite of the stony soil, there is more corn grown than is needed for consumption. Some mining is carried on upon iron. The population was returned in 1818 at 37,032 inhabitants; it now amounts to 39,000, the majority of whom are Catholics. A constitution has not yet been introduced. The revenue is about 300,000 florins. The prince holds the sixteenth place in the confederacy, with the already-mentioned States, and has one vote *in plenum*. The contingent is 370 men. Sigmaringen, on the Danube, with 777 inhabitants, is the capital, and contains a castle, in which the prince resides.

CHAP. XXXV.—THE PRINCIPALITY OF LICHTENSTEIN.

THE principality of Lichtenstein consists of the two lordships of Vadutz and Schellenberg. It is bounded on the N. and E. by the Tyrolese circle of Vorarlberg; on the S. by the Helvetic canton of the Grisons; and on the W. by the canton of St. Gall. This little territory does not exceed 50 British square miles, and is on the S. and S.E. covered by high Alps. The Rhine runs along its boundaries on one side. It produces corn, flax, wine, fruit, cattle, and wood. The population is now estimated at nearly 6000, who are chiefly Catholics. The revenue is 30,000 florins; and the contingent 55 men. Besides this little sovereignty, the prince of Lichtenstein possesses certain principalities and lordships lying within the Austrian monarchy, and extending altogether to above 2,100 square

miles, with a population of 350,000 inhabitants, and a revenue of 1,200,000 florins. The prince has with the two houses of Hohenzollern, the two branches of Reuss, the two houses of Lippe, and the prince of Waldeck, the sixteenth place in the confederacy, and has one vote *in plenum*. Vadutz, a borough, with 1800 inhabitants, is the chief town in the principality.

CHAP. XXXVI.—THE PRINCIPALITY OF REUSS OF THE ELDER LINE.

THE principality of Reuss has its name from its rulers, the princes Reuss of Plauen, in whose family the singular custom prevails that all male individuals are called Henry; a number is added to their name to distinguish them from one another. The principality consists of two large districts: the northern, or the principality of Gera, is bounded on the N. by the Prussian dominions; on the E. and W. by Gotha: and on the S. by Weimar. The southern is bounded on the N. by the Prussian dominions, and by Weimar; on the E. by the kingdom of Saxony; on the S. by Bavaria; and on the W. by Coburg-Saalfeld, and by Schwarzburg. The superficial extent of the whole principality is nearly 620 square miles, with a population now amounting to 79,000. The reigning house is divided into four lines: viz. that of Greiz, Schleiz, Ebersdorf, and Lobenstein; of whom Greiz forms the elder, and the three others the younger line. The prince of Reuss-Greiz possesses a mountainous and woody territory of about 150 square miles, with a population, as given in the act of confederacy, of 22,255 inhabitants, chiefly Lutherans, and a revenue of about 130,000 florins. The contingent is fixed at 222 men. Greiz is the capital, with 6,195 inhabitants. The Burgkhammer is one of the finest iron smelting works in Germany.

CHAP. XXXVII.—THE PRINCIPALITY OF REUSS OF THE YOUNGER LINE.

THE younger line of the princes Reuss of Plauen is divided into two branches, which form one State of the confederacy, namely, that of Schleiz and that of Lobenstein; which latter is again divided into two branches, viz. Lobenstein and Ebersdorf. The surface of their united possessions is about 450 square miles. There are extensive woods, and good mines of iron, and the rearing of cattle is carried on to a considerable extent. Manufactures are likewise conducted in a very animated manner. The population, as given in the act of confederacy, was 52,205, all of whom were Lutherans, except one community of Moravians. The revenue is about 350,000 florins. The contingent is fixed at 522 men. Schleiz, capital of Reuss Schleiz, and residence of the prince of Reuss Schleiz, is elevated about 1,521 feet above the sea, and contains a population of 4,620 inhabitants. Lobenstein, with 2,716 inhabitants, is the residence of the prince of that name. Gera, on the Elster, with 7,373 inhabitants, is a very industrious town.

CHAP. XXXVIII.—THE PRINCIPALITY OF LIPPE-DETMOLD.

THE principality of Lippe-Detmold is bounded on the N. by Prussia; on the N.E. by Hessen-Cassel; on the E. by Hanover and Waldeck; and on the S.E. and W. by Prussia. The surface is about 430 square miles: Balbi says 330 geographical square miles. The ancestors of the princes of Lippe belonged in the 12th and 13th century to the *Primates Westphalorum*, who possessed extensive hereditary estates. In the 16th century, they divided into three lines: viz. Detmold, Bracke, and Schauenburg. The second one became extinct; and the first and third are now existing. The present prince of Lippe-Detmold stood under the regency of his mother, not being of age when his father died in 1802. She gave a very liberal constitution in 1819; and in 1820 resigned the government to her son. The country is partly very mountainous, but part of it is very fertile. There are some very large and ancient forests. Wood is a staple ware, and the country is very productive. The population has been stated at 69,062, of whom the majority are Calvinists; there are about 5,100 Lutherans, and 600 Catholics. The establishments for education have been greatly improved of late. The princes of Lippe-Detmold, and Lippe-Schauenburg, with the princes already enumerated, hold the sixteenth place in the confederacy, and have each a vote *in plenum*. The revenue is about 480,000 florins. The contingent is fixed at 690 men. Detmold, the capital, lies on the Werra, and has 2,370 inhabitants.

CHAP. XXXIX.—THE PRINCIPALITY OF SCHAUENBURG-LIPPE.

THIS principality is bounded on the N. and N.E. by Hessen-Cassel; and on the S.W. and W. by the Prussian dominions. Its extent is about 200 square miles. The country is hilly; but there are no mountains of considerable height. The large lake called the Steinhudermeer chiefly belongs to this principality. The population was returned to the confederacy at 24,000, who are mostly Lutherans. A constitution was given in 1816 by the present prince. The revenue is about 215,000 florins; and the contingent 240 men. The only standing military force is a company of invalids, occupying the little fortress of Wilhelmstein, lying on the Steinhudersmeer, and a small body-guard. The chief town is Bückeburg, the residence of the prince, with 2,060 inhabitants. Stadthagen, with 1,461 inhabitants, was the native place of the great geographer Büsching.

CHAP. XL.—THE PRINCIPALITY OF WALDECK.

THIS principality takes its name from an old ruined castle, on a mountain near the town of Waldeck. It consists of two parts: 1*st.* The principality of Waldeck, bounded on the W. and N. by the Prussian dominions; on the E. by Hessen-Cassel; and on the S. by Hessen-Cassel, and Hessen-Darmstadt; 2*d.* The county of Pyrmont, which lies on the W. side of the Weser, between the Lippe, Hanover, and Prussian dominions.

The united surface is nearly 500 British square miles. Both countries are mountainous. There is no large river. The county of Pyrmont is a single valley through which the Emmer flows. The population, as returned to the confederacy, amounts to 51,877, mostly Lutherans. The establishments for education are in a rather neglected state. The revenue is 400,000 florins, about £45,000, and the debt, in 1826, about £125,000. The contingent 518 men. Arolsen, the chief town, and residence of the prince, has near 2000 inhabitants. Pyrmont, the chief town of the county of the same name, has also about 2000 inhabitants, and is celebrated for its mineral springs, and splendid bathing establishments, which are frequented by 1,500 or 2000 visitors every year.

CHAP. XLI.—THE LANDGRAVIATE OF HESSEN-HOMBURG.

The landgrave of Hessen-Homburg, a prince of the house of Hessen-Darmstadt, obtained at the congress of Vienna the rights of a sovereign. His possessions are: 1*st*. The lordship of Homburg, a small county in the Wetterau, bounded on the W. by Nassau; and on all other sides surrounded by the dominions of Hessen, and 2*d*. The lordship of Meisenheim, beyond the Rhine, bounded on the N. by the Prussian dominions; on the E. and S.E. by Bavaria; on the S.W. by the principality of Liechtenberg; and on the W. by the principality of Birkenfeld. Both parts together have a surface of 6½ German, or 140 British square miles. The lordship of Homburg lies beneath the Hohe. The soil is not sterile. The lordship of Meisenheim has some branches of the Hundsrück in its circumference: the soil is, however, fertile. Homburg is very well cultivated, and there is also an animated industry. Meisenheim is an agricultural country. The population now amounts to 21,000, of whom the majority are Lutherans. The landgrave has one vote *in plenum*. No constitution has yet been established. The revenue is nearly 200,000 florins; and the debt about 400,000: the contingent is about 200 men. Homburg is the chief town, with 2,964 inhabitants. The castle, in which the landgrave resides, commands a delightful view.

CHAP. XLII.—IMPERIAL AND HANSEATIC TOWNS.

These are now reduced to four, namely, Frankfort on the Mayne, Bremen, Lubec, and Hamburg. The number of imperial cities in Germany once amounted to 90, and the Hanseatic league formerly comprehended 72 federal cities. We have already traced the rise of this association. Almost every trading-town in Europe was ambitious of becoming a member of the league; but it appears to have been a fixed principle, to exclude every town that was not situated on a navigable river, or on the sea-shore. The towns were divided into four classes, at the head of which were Lubec, the capital of the league, Cologne, Brunswick, and Dantzic. This powerful association was in its most flourishing state about the end of the 14th, and commencement of the 15th century, when it interfered to a great extent in the affairs of Europe. But this commercial greatness excited the jealousy of the continental princes, who induced the merchants of their respective countries successively to withdraw from the league, which in a short time was so

much reduced, as to comprehend only the five cities of Hamburg, Lubec, Cologne, Brunswick, and Dantzic. In 1803, the only members of the league were, Hamburg, Lubec, and Bremen; and during the latter period of Napoleon's power, these cities were stript of their independence, which they however again recovered by the expulsion of the French from Germany, and which was finally recognized by the congress of Vienna. These things premised, we shall give a short account of the Hanseatic towns, along with the imperial city of Frankfort.

THE FREE TOWN OF FRANKFORT ON THE MAYNE.

THIS ancient, free, and imperial town, previous to the dissolution of the German empire, was the place at which the emperors were elected, and crowned; and by the congress of Vienna it has been fixed as the place of assembly for the German confederacy.

History and Government, &c.] The origin of this town reaches up to the earliest epochs of German history. In 794, there was a royal palace here, which was reckoned among the oldest of the possessions of the Franconian kings. After the treaty of Verdun, it formed the capital of the East Franconian empire. In 1254, Frankfort was declared a free town of the German empire, and was confirmed as such in the Westphalian peace. When the Rhenish confederation was formed, Frankfort was given to the prince-primate of the confederation, and fixed as the place of assembly. Frankfort holds now, with the three other free towns, the seventeenth place in the confederacy, and has a vote *in plenum*. The territories of the town occupy a surface of about 100 square miles, and are surrounded by Hessen-Cassel, Hessen-Darmstadt, and the Nassau dominions. The plain in which the city stands is extensive, level, fertile, and cultivated like a garden. The whole population of the city and territory amount to 73,400, of whom 60,000 live in the town. The majority are Lutherans, who have 7 churches in town, and 7 out of the town; the Catholics have 9 churches, and the Calvinists 2; and there are about 12,000 Jews, who have 2 synagogues. The constitution was formerly entirely aristocratic; but a new one was instituted in 1816, which places the sovereign power in the hands of all the citizens of the Christian confession. The legislative body consists of 20 senators, and 65 other members chosen from the citizens. The senate is the executive power, and consists of 42 members, divided into branches, among whom are the syndics and the two burgomasters. The revenue, in 1826, was about 800,000 florins, or £90,000, and the debt above £800,000: the contingent is 473 men.

Description of the City.] Frankfort is a large, indifferently built, commercial and manufacturing city, of a circular figure, and containing 3,600 houses. It is divided into two unequal parts, by the Mayne, or Main, over which is a bridge of 14 arches. That part on the north of the river is by far the largest, and is properly called Frankfort; the other, on the south side, is denominated *Saxenhausen*, or 'the dwelling place of the Saxons.' It was till lately well-fortified, with 11 bastions, large and deep ditches, and counterscarps, besides other outworks; but the fortifications have been converted into public walks. The principal streets of Frankfort are handsome and broad, but the rest are narrow. Frankfort is one of the most commercial places in Europe, and possesses two annual fairs of great celebrity. These fairs are kept in March and September; and are frequented by above 1,500 merchants, from every country of Europe.

The principal transactions are in cotton, woollens, and books, of which an extensive yearly catalogue is published. After the fairs are over, most of the shops of the foreign merchants are shut up. The pleasure gardens of the richer inhabitants, and the public tea-gardens, add greatly to the ornament and beauty of the vicinity. Frankfort is the birth-place of Göethe.[65] It lies 22 miles E. of Mentz; Long. E. of Greenwich 8° 35′; and 49° 55′ N. Lat.

THE FREE HANSEATIC TOWN OF LUBEC.

History, &c.] An ancient Slavonian tribe, the Wilzes, in the beginning of the 9th century, built a fortress on the banks of the Schwartan, to resist the powerful Obotrites. This was the ancient Lubec, or Lubeck. The Obotrites conquered this town; and in 1139, it was destroyed by the Rugians. Count Adolph of Holstein built the present town on the banks of the Trave, in 1144. In 1226, it was declared a free town of the empire by Frederic II., from which time its commerce became very extensive; it formed the staple place for the Baltic trade, took part in the Crusades, and sent fleets to Portugal and the Mediterranean. In 1241, it united with Hamburg in the Hanseatic league, of which it formed the place of assembly. But with the decay of the league, Lubec's importance declined; and though its commerce is still extensive, it will never again reach the point at which it once stood. In 1810, Lubec was incorporated with the French empire; but after the battle of Leipzig, it resumed its former situation, and in 1815 it entered the German confederacy. The whole surface of the territory is about 110 square miles. The population amounts to 40,650 inhabitants, of whom 25,526 live in the town. They are chiefly Lutherans, with the exception of a few Catholics and Calvinists. Lubec holds, with the three other free towns, the seventeenth place in the confederacy, with one vote *in plenum*.

The constitution is aristo-democratic. The senate consists of 20 members, among whom are four burgomasters, and two syndics. The revenue is about 400,000 florins, and the debt nearly £400,000: the contingent is fixed at 406 men.

Description of the City.] The Trave receives the Steckenitz, another navigable stream, by means of which it communicates with the Elbe. A little below, the Trave receives the Wackenitz, another navigable stream, issuing from the lake of Ratzeburg. After receiving the Swartau in its progress, this river falls into the Baltic. By means of these several streams, long and flat-bottomed vessels pass from the Baltic along the Trave, the Steckenitz, and the Elbe, into the German Ocean: so that, Lubec, by its situation, may be said to enjoy both the commerce of the

[65] Frankfort has suffered severely, at different times, from France. During the war of Seven Years, its neutrality was violated, and the city seized by the French, who kept it during almost the whole of that period. In 1793, it was taken by general Custine, the French republican commander, and subjected to a contribution of 1,000,000 rixdollars, or £175,000 sterling. But its fate was still worse in 1796, being compelled to pay contributions to the amount of 16,300,000 livres, or £713,125 sterling. In 1797, another contribution of 2,000,000 livres, or £87,500 sterling was raised on it. In 1799, it was compelled to pay another contribution of 1,424,000 livres, or £62,300 sterling, besides various requisitions. In February, 1806, another contribution of 4,000,000 livres, or £350,000 sterling, was levied; and to complete the business, the city, territory, and privileges, were sold by Bonaparte, for 12,000,000 livres, or £525,000 sterling. Frankfort recovered its liberty by the fall of the oppressor, but it will not soon repair its losses.

German and the Baltic seas. It stands on the two sides of a long hill of moderate elevation; it is of an oval form, 2,150 paces in length, and 1,300 paces in breadth, and is environed by a wall, ditch, and ramparts. Most of the streets are steep; the houses are of stone, and old-fashioned; few of the public buildings are elegant. Travemunde, 10 miles from Lubec, and two from the Baltic, is the port of the city, as ships of burden cannot ascend higher. The harbour of Travemunde is capable of containing 60 vessels carrying 200 tons each. Lubec is situated 30 miles N.E. of Hamburg, in N. Lat. 53° 52′.

THE FREE HANSEATIC TOWN OF BREMEN.

Bremen is a very ancient place, which owes its origin to a bishopric, founded by Charlemagne in 787, or 788. It was declared a free town under the emperor Otto I., and its privileges were confirmed in the Westphalian peace. In 1810, it was incorporated with the French empire, but returned to its ancient political situation in 1813. The territory of Bremen lies on both sides of the Weser. It is bounded on the N. and E. by Hanover, and on the S. and W. by the duchy of Oldenburg. The superficial extent is about 70 British square miles. The population of the town and territory was given in the act of confederacy at 38,500, but it now amounts to 49,000, of whom 38,000 reside in the town. The French census in 1811 gave 46,270 inhabitants, of whom 36,630 lived in the town. They are chiefly Lutherans and Calvinists. The two Protestant confessions have equal rights, though formerly the Calvinistic creed was the established religion, and the Calvinists still retain a majority of the churches. The constitution, which in former times inclined to oligarchy, is now entirely democratic. The legislative power is in the hands of an assembly of all the citizens, servants only excepted. The executive power belongs to a senate, consisting of 4 burgomasters, 2 syndics, and 24 counsellors. The revenue, in 1826, was about £42,000, and the debt about £330,000. There is a militia; and the contingent is fixed at 385 men.

Description of Bremen.] The city is situated in a plain, on both sides of the Weser, which divides it into the old and new town, joined together by wooden bridges. On the largest of these is a hydraulic engine for raising water, and distributing it over all the city. The streets of the old town are large, and centre in the market-place. In the new town stands the stadt-house, an elegant modern building, with spacious rooms. The new town is not above three centuries old, and was not walled till 1623. The ancient cathedral in the old town belongs to the Lutherans; and underneath it is the Bleikellar, or 'lead cellar,' famous, like the vault under the cathedral at Bourdeaux, on account of the undecayed corpses, which have been preserved in it for centuries. The commerce of Bremen is very considerable, especially in the article of Rhenish wines. There is also a considerable trade in iron, flax, hemp, and linen, besides many manufactures. As Bremen has been more distinguished for religion than the most of commercial cities in Germany, the Bible society which was lately organized here, met with zealous encouragement from the citizens, and promises to be productive of happy effects in ameliorating the moral condition of the people. Bremen is the birth-place of the astronomer Olbers, and the historian Heerm.

THE FREE HANSEATIC TOWN OF HAMBURG.

History, &c.] Hamburg is a town of very great antiquity. Charlemagne established a bishopric where Hamburg now stands. In the 11th and 12th centuries, the fishing in the Elbe, and navigation and commerce, had greatly enriched the town, then belonging to Holstein, but enjoying many privileges which gradually resolved into independence. The decay of the Hanseatic league did not affect it materially, and it is still the staple place of commerce for the North of Germany. The continental system destroyed its commerce, and in 1810 it was incorporated into the French empire. In 1813, it became the theatre of war, by which it suffered much. In 1814, the peace of Paris restored it to its former situation. In the congress of Vienna, it was received as a free town into the German confederacy. The town and territory of Hamburg lies in the N. of Germany, partly in Holstein and Hanover. The territorial extent is nearly 130 British square miles. The country is level, and watered by the Elbe and Elster. The population of the town and territory was given in the act of confederacy at 129,800; but, in 1826, it had risen to 148,000. The majority are Lutherans, but all other confessions have the free exercise of their worship. The government is aristo-democratic. The senate consists of 4 burgomasters, 4 syndics, 24 counsellors, 1 prothonotary, 1 archive, and 2 secretaries. The military amount to about 1,050 men; the contingent is fixed at 1,298 men.

Description of the City.] The town of Hamburg lies on the right, or northern bank of the Elbe, about 75 British miles, by the windings of the stream, from the sea; Long. 9° 56′ E. of Greenwich, and 53° 36′ N. Lat. The Elbe—which, including the sand-bars and small islands, is here fully a German mile, or nearly five English miles broad—besides forming two spacious harbours, runs through most part of the city in canals, which being in general pretty broad and deep, are of great convenience to the inhabitants. In these canals, as well as in the river itself, even to the distance of 16 English miles above Hamburg, the tide ebbs and flows twice a-day, which is also of great service to the inhabitants, though not without the frequent and great inconveniency of inundations, caused by the N.W. winds. The city is built partly on islands, and partly on the continent of the north bank of the Elbe; and is divided by a canal, into the old and new town. Towards the east, it is washed by the small river Bill; and towards the north, by another small stream called the Alster, which forms a very large basin just without the town, and another about 1000 feet square, within the walls, after which, it passes through different parts of the city, till it reaches the Elbe. The several islands formed by the Elbe and Alster, on which the town is built, communicate with each other by no less than 84 bridges. The whole city is surrounded by a lofty rampart and a broad ditch. The town, though large and flourishing, is not elegant. The streets are mostly very narrow and dark, especially in the old town; yet some of them make a grand appearance, being bordered with long and broad canals. The houses are built mostly after the Dutch fashion, and are very lofty, several of them being six and seven stories high; but there are a great number of narrow lanes, wherein many families live together, so that the circuit of the place is by no means proportioned to the number of inhabitants. The fortifications of the city are in the old Dutch style; the

moats being deep and wide, the ramparts lofty, and planted with trees, and of such breadth that several carriages may go abreast. The Hamburgerberg may be styled a suburb, though not environed by works. It extends as far as Altona, from which it is separated only by a ditch. The churches are mostly Gothic structures, having beautiful altars, large organs, and lofty spires, that of St. Michael exceeding 400 feet in height. The spires are covered with copper, and make a splendid and glittering appearance during sunshine. The houses are more noted for internal conveniency, than for external grandeur. The warehouses of the merchants are generally in the upper stories, to prevent damage from the frequent inundations occasioned by high floods in the river: the back part of the houses being commonly so near the water, that the vessels come to unload at the very doors. The exchange is a noble edifice, but much inferior to that of London. On account of its advantageous situation on a large and navigable river, Hamburg has always enjoyed an extensive commerce, both foreign and inland. As Amsterdam declined, it became the depot of all the continental commerce; and numbers of merchants resorted hither from every part of Europe, carrying their property along with them, as to a place free from military sway, and secure from the warlike commotions which then shook to their very centres all the Continental States. Previous to its recent calamities, its merchants were rich, and their credit equal to any in the world; and the powers of the North found themselves as much interested in the stability of the city and its commerce, as the citizens themselves. But a course of events was rapidly taking place, which was to overturn this flourishing state of things, and reduce this once opulent city to poverty and ruin. The vast military power which France had acquired, by its various contests since the revolution, instead of being employed in maintaining the cause of liberty, as was pretended at the outset of its career, was employed in enslaving every State and power whose means of defence were inadequate to protect their own liberties. For a considerable time, however, the neutrality of Hamburg was respected; it saw the south of Europe enslaved, but its own security seemed confirmed by the peace of Amiens. But when the flames of war again broke forth with increased violence, and Austria, Prussia, and Russia, were successively humbled, and reduced to a state of temporary vassalage, Hamburg shared their reverses. As it had long been the channel through which British manufactures and colonial produce had found their way into the Continent, Bonaparte determined to shut it up. He first violated its neutrality, by filling the city with his troops; and then he not only compelled the citizens to furnish him with forced loans, but all the British property in the city was also seized by a decree of the 15th December, 1806, and the blockade of the Elbe rigidly enforced. All that now remained of its once vast commerce, was a small smuggling trade, carried on through the medium of the Danish ports of Husum and Tonningen. In 1813, the French plundered the bank of 19,000,000 livres, and levied a contribution of 48,000,000 livres, and a requisition of 40,000,000 livres, with other requisitions from May, 1813, to May, 1814, amounting to 18,700,000 livres more on the citizens; so that, from the time the city was evacuated by Tettenborn, and seized by Davoust, till the peace of Paris in May, 1814, Hamburg had been subjected to pay the enormous sum of 127,500,000 livres, or £5,578,125 sterling; to which, if we add 60,000,000 livres, or £2,625,000 sterling, paid to France up to its occupation by Tettenborn, the total will

amount to £8,283,125 sterling, extorted by French rapacity! The public debt of Hamburg, in consequence of the above proceedings, was raised to 52,000,000 marks banco, or £3,900,000 sterling. The French government has restored indeed a part of the sum of which the bank was robbed; but this restitution is altogether trifling when contrasted with the enormous sums which the rapacity of Bonaparte's administration wrung out of this devoted city. Previous to its recent disasters, the established revenue was estimated at 3.600,000 marks banco, or £285,000 sterling; in 1826, it amounted to about £234,000, and its debt to nearly £2,000,000. Since the overthrow, however, of Bonaparte's system, and the consequent return of Hamburg to its old laws and government, this city may be rationally expected to recover in some measure its former prosperity and importance. In the city are many schools, libraries, and literary institutions, which reflect honour on the enlightened taste of its inhabitants; besides several valuable collections of paintings, pictures, and objects of natural history. It has been at times the residence of many distinguished literary characters, as John Albert Fabricius, John Christopher Wolfius, Lessing, and Klopstock. It possesses a French and German theatre; and musical science has been long cultivated with success at Hamburg. Distance from Berlin 170 miles N.W.; 201 N.E. of Amsterdam; 504 N.W. of Vienna; 272 N. of Frankfort on the Mayne; 382 S.W. of Dantzic; 232 S.W. of Copenhagen; 330 S.W. of Gottenburg, and 85 N.E. of Hanover.

The chief dependancies of Hamburg are the bailiwick of Ham, and some islands and low lands on the Elbe; and, besides some districts acquired from Holstein, the bailiwick of Ritzebuttle, containing an area of 100 square miles, and including the port of Cuxhaven, and the isle of Newerk, situated opposite that port.

Authorities.] No country of Europe has been so amply and minutely described in all its geographical details, as Germany. Every State, and almost every town, has its own annalists, topographists, staticians, antiquarians, and naturalists; the mere enumeration of whose works would fill volumes. The following may be consulted with advantage by the general reader:—Heysler's Travels, 1756. 4 vols. 4to.—Riesbeck's Travels, by Maty, 1787. 3 vols. 8vo.—Mannert, Statistik des deutschen Reicks. Bamberg, 1806. 8vo.—Coxe's History of the House of Austria, 1807. 2 vols.—Borsgelin's Travels, 1810. 2 vols. 4to.—Reichard's Itinerary of Germany.—Hodgskin's Travels in the North of Germany. 2 vols. 8vo.—Top. militär. Charte von Teutschland, Weimar seit 1807, in 204 Sektionen; mit dem Supplemente in 40 Sektionen, Weimar seit 1814.—Liechtenstern, Archu für Geographie und Statistik. Wien, 1801–1818.—Hassel, Volständege und neueste Erdbeschreibung von Deutschland. Weimar, 1819. 2 vols. 8vo.—Jacob's View of the Agriculture, Manufactures, &c. of Germany, 1820. 4to.—Tennant's Tour in the years 1821-2. 2 vols. 8vo.—Schreiber's Guide down the Rhine., 18mo.—Stein, Kleine Geographie. Leipzig, 1826. 8vo.

AUSTRIA.

Boundaries.] THE empire of Austria is bounded on the N. by Prussia, Cracovia, and Russian Poland; on the E. by Russia and Turkey; on the S. by Turkey, the Adriatic Sea, the States of the Church, the duchies of Modena and Parma, and the Sardinian territories; and on the W. by the Adriatic, Sardinia, Switzerland, Bavaria, and Saxony.

Extent.] The extent of the Austrian dominions, from W. to E. is 820 British miles, or 720 geographical miles, taking it from the western extremity of the Vorarlberg, on the Rhine, in 9° 30′ E. Long. and 47° N. Lat. to the eastern confines of the Buckowine, on the Sereth, parting it from Turkish Moldavia, in 27° E. Long. from Greenwich; but if we take it from the confluence of the Inn and Danube, in E. Long. 13° 45′ and 48° 35′ N. Lat. to the junction of the Podhorcze and Dniester, in 26° 20′ E. Long. and 48° 45′ N. Lat. the length will be only 12° 40′, making 520 geographical, or 623 British miles. If we take it from the most western point of Bohemia, to the Bug, which separates the Austrian dominions in Poland from the Russian territories on the north and on the east, the length will be 530 British miles. But the greatest extent is in the southern part of the Austrian dominions, where, if we take it from the western boundary of the Austro-Italian States, in Lat. 46° N. and 8° 40′ E. Long. where the Tessino flows out of the lake Maggiore, to the river Sereth, it will amount to 900 British miles. The greatest breadth, from the frontiers of Bohemia, in 51° N. to the southern point of the peninsula of Istria, in 45° N. is six degrees, or 415 British miles; and if we draw a line from Zawichost, on the Vistula, eight miles to the north of its confluence with the San, to the northern bank of the Danube, and its most southerly winding in the Bannat of Temiswar, the breadth will be much the same. The fact is, that the figure of the Austrian dominions is extremely irregular, so that its extent, whether from E. to W., or from N. to S., varies exceedingly in different places; but, as we have observed, the length is greatest on the south side. Liechtenstern estimated the total superficial extent of the Austrian territories at 12,046.2 German square miles,—an estimation which we conceive is considerably beneath the truth: Blumenbach's calculation, by which he assigns 12,206 German square miles, or 262,429 British square miles, to Austria, is certainly nearer the truth. We shall be guided by the later statistics and calculations of Stein in our account of this important empire.

General Divisions.] We have already stated that the Austrian empire may be considered as divided into four parts, corresponding with

the four principal nations composing its population. The extent and population of these parts are as follow:—

	Extent in German Square Miles.	Population.
I. The German States of Austria already described:—		
1. The archduchy of Austria,	708	1,956,334
2. The duchy of Styria,	399	805,847
3. The kingdom of Illyria,	519.2	1,039,175
4. The Tyrol,	520.5	755,401
5. The kingdom of Bohemia,	956.8	3,539,441
6. The margraviate of Moravia and Austrian Silesia,	492.75	1,890,706
II. The Galician States, including the Buckowine and Lodomeria,	1,535	4,102,733
III. The Hungarian States: viz.—		
1. The kingdom of Hungary, including the kingdom of Slavonia and Croatia,	4,180.23	8,700,000
2. The principality of Transylvania,	842.25	1,825,307
3. The military frontiers,	881.75	1,010,878
4. The kingdom of Dalmatia,	306.5	334,075
IV. The Italian States, the Lombardo-Venetian kingdom,	862.5	4,161,078
	12,204.48	30,120,975

The population, therefore, of the whole empire is nearly 2,468 to the German square mile, or nearly as 110 to the British square mile. Balbi, however, estimates the population to have been, in 1826, 32,000,000.

Arrangement.] The air, climate, soil, produce, face of the country, population, manners, customs, and languages, of these different divisions of this extensive empire, differ so considerably from each other, that it is impossible to take a general view of them; and we are therefore under the necessity of deviating somewhat from our ordinary plan, and of discussing them separately, as they occur in order. We have already, in our account of Germany, described the German States belonging to Austria. And we shall, after taking a political view of the empire as a connected whole, proceed to the topography of the Galician and Hungarian States, leaving the particular description of the Lombardo-Venetian kingdom to be given under the general head of Italy, for the same reasons that have induced us to give the German States under the general head of Germany.

CHAP. I.—POLITICAL SITUATION—GOVERNMENT—FINANCES—MILITARY POWER.

Political Situation.] We have already, in our historical introduction to Germany, detailed the fortunes of the imperial house of Austria.

The history of the remaining States of the empire will be given with our geographical description of them. In the meantime, we shall take a view of the political situation of this important empire.

Next to Russia, the Austrian empire contains a greater variety of population than any other country in Europe. Germans, Wends, Wallachians, Hungarians, Poles, Bohemians, Croatians, Italians, and other tribes, form a medley population,—all differing in their manners, languages, religion, and customs,—mutually strangers to each other,—and having opposite views, interests, and constitutions. The Hungarians, Slavonians, Croatians, and Transylvanians, are as different from the Austrians, and these in their turn from the Bohemians, as the British are from the French and Spaniards. It is this variety of population, this diversity of language and manners, this collision of interests and opinions, that so long prevented the Austrian empire from exerting her whole collected strength, and becoming a match for the power of France. The circumstances of these two rival powers were totally different. The dominions of France form one compact empire; its soil is generally rich and productive; its territory, though less extensive, is on an average much better peopled; its resources are immediately at hand; the whole mass of its population speak the same language, has the same manners, the same interests, the same love of country and of national fame, is firmly united in one compact political body, and has its whole strength closely concentrated. These circumstances during the late war operated mightily in favour of France, and to the disadvantage of Germany and Austria. Not only is the population of the Austrian empire, in the above-mentioned circumstances, different from that of France; but even its dominions are geographically ill-connected and disjointed. A long time is thus necessary for the march of her levies from one extremity of her dominions to the other, and of course very great expenses must be incurred, before they arrive at the place of their destination; whereas the armies of France are soon levied in a close concentrated population; and when levied, may immediately, and with the greatest celerity, be marched to the frontiers. If Bohemia, for instance, be invaded, it may be wholly in the hands of the enemy, before the troops of Hungary, Transylvania, and Croatia, can arrive at the scene of action: and her Italian and Polish subjects have hitherto been of very little use to Austria, in a military point of view. The compact situation of France, and her dense population, always enabled her, in former times, to march her army from the interior in a very short space of time, either for the purposes of invasion or defence: as was plainly the case, when the Belgic provinces were in the hands of Austria. This last country was much too near the iron frontier of France, and much too far removed from the Austrian territorial limits, ever to be effectually defended. But a considerable change of relative frontier, has been effected in the recent treaties of 1814 and 1815, and by the late acquisition of Salzburg, from Bavaria, in exchange for the territory on the west of the Rhine; so that the most western point of the Vorarlberg, though distant 100 miles from French territory, is now the nearest approximation of the Austrian frontier to that of France. The annihilation of the petty principalities on both sides of the Rhine,—the union of Belgium with Holland,—the political connexion between the Belgic and Prussian monarchies,—the extension of the Prussian frontier to the west of the Saare,—and the military strength of this last State, combined with the

recent enlargement of Bavarian power, must certainly contribute to strengthen the German barrier against the attempts of French ambition.

Of all the late acquisitions made by the belligerent powers, those of Austria are the most important. Her territories are more consolidated than before; she is removed to a distance from the dominions of France; and by the confirmed possession of all the Venetian territories, she has it now in her power to become a maritime State, and to enjoy all the advantages of foreign commerce. The whole line of sea-coast, reaching from the mouth of the Po to the head of the Gulf of Quarnaro, and from this last gulf, in a continuous line, to the borders of the Gulf of Drin, in Upper Albania, a tract of more than 500 British miles, is now in her possession, under the appellation of *Maritime Austria;* forming, from its political and commercial importance, as is justly remarked by Oppenheimer, a golden seam, or border, to the Austrian monarchy, and containing a population of 3,110,000 souls. Besides, the time is probably not far distant, when from the dissolution of the Turkish power, now rapidly verging to a state of political annihilation, she will obtain possession of all the country to the south of the Danube. It is at least clear, that the Turkish dominions will become a bone of future contention, between the great powers of Russia and Austria. For this last power, will never, if she is able to prevent it, suffer the Russians to seize all the Turkish provinces; and if Turkey is ever dismembered, Austria will probably obtain, if not all, at least a large share of the maritime coast. It is evident, that the want of commerce, resulting from the inland situation of the Austrian provinces, was one great bar in the way of their civilization. All history shows that social civilization spreads most rapidly, in countries where the intercourse is best accelerated by the means of navigation. The early prosperity of Egypt, and the rapid progress of Greece, are chiefly to be traced to a cause, which strikes the eye on the very first inspection of a map: namely, a large navigable river, and a great extent of maritime territory,—while a similar reason suffices to the geographical observer, in accounting for the ignorance and barbarism of Africa: namely, the vast, sandy, and almost impenetrable desert, that intervenes between the maritime parts and the Niger. The Austrian empire presents vast capabilities of improvement. Political calculators are not always credited, when they assert, that the population of England or France might be doubled, by adopting throughout these kingdoms at large, the improved agriculture of certain districts; but it is evidently much less sanguine to hazard such an assertion respecting Austria, whose provinces are equally fertile with those of France or England, while their proportion of population is very much inferior. Hungary, and Bohemia in particular, may vie with any countries in the world, of the same extent, in the abundance and excellence of their productions, their plentiful crops of grain, their numerous herds of cattle, and the variety of their metals and minerals. The population of Hungary might be doubled, were its marshes drained, were canals cut, and were large tracts at present lying waste, brought into a state of cultivation. No country presents such facilities for inland navigation, as the wide, extended, and fertile plains of Hungary; and the extraordinary plenty and cheapness, as well as the excellent quality of all kinds of provisions, not only in Hungary and at Vienna, but throughout every other part of the Austrian dominions, sufficiently demonstrate the abundance of the productions of the soil, and the necessity of a more

lively and extensive trade, to carry this vast exuberance into wider circulation. It is certain, however, that the wealth of the Austrian provinces is advancing, and is now more likely to continue so than ever, as the abolition of the feudal system, together with the free toleration of the different religious communities existing in the various countries of this monarchy, and other wise and prudent measures adopted by the imperial court, combined with the present enjoyment of peace, are beginning to excite a commercial spirit in its dominions, and habits of industry and enterprise among the people. Nothing is wanted but a free government to enable Austria to speak defiance to the ambitious Russian, and take a leading part in the politics of Europe.

Government.] The fundamental laws of the Austrian empire are, 1*st*, The pragmatic sanction of Charles VI., bearing date the 9th April, 1713, by which the succession and indivisibility of the Austrian monarchy is declared and provided for; 2*d*, The manifesto on assuming the hereditary dignity of emperor of Austria, dated 11th August, 1804; 3*d*, The manifesto which fixes the title and armorial bearings of the imperial house, dated 6th August, 1806.

The particular laws for the German States are, 1*st*, The act of confederacy of the 8th of June, 1815; 2*d*, For Austria, the Frederician charter of 1156, and several special ordinances and manifestos—and for Tyrol, the constitution act of the 24th March, 1816; 3*d*, For Bohemia and Moravia, the provincial ordinance of Ferdinand II. of 1627; 4*th*, For Silesia, the *sanctio pragmatica* of the 1st September, 1707, and 8th February, 1709. The particular laws of the other parts of the empire shall be mentioned hereafter.

The form of the State is an hereditary monarchy, composed of several different but indivisible kingdoms and provinces, of which a part has been already described with the German confederacy. The sovereign bears the title of emperor; and, with exception of the military frontiers, Friuli and Trieste, there is a representation for all the countries. But the States are only of importance in Hungary and Transylvania; in the other provinces, their existence for the most part is merely nominal. The person of the emperor is sacred, and he is not accountable for his acts of government to any tribunal. Every right of sovereignty, except those which the Hungarian magnats possess, rests in his hands.

The succession goes by primogeniture in the male and female line, so that when the emperor dies without male heirs, his eldest daughter succeeds; and if he has none, the next agnate, whom failing, the collateral branches. If the whole dynasty is extinguished, the Hungarian and Bohemian States resume their right of election; but with regard to the succession to the other provinces, the last ruler may bequeath it according to his pleasure. The new emperor mounts the throne by right of birth, and receives the oath of allegiance from all his subjects. In Hungary alone he is obliged to guarantee the privileges of the country. He is crowned emperor of Austria by the archbishop of Vienna; king of Bohemia by the archbishop of Prague; king of Hungary by the archbishop of Gran; and the iron crown of the Lombardian kingdom is placed on his head by the archbishop of Milan. The epoch of minority varies in different countries. A king of Hungary and Bohemia is of age at 14; an archduke of Austria at 18. The regency in the German States depends upon the disposal of the last sovereign. The title of the emperor is, *N.N. by the grace of God, emperor of Austria, king of Jerusalem, Hungary, Lom-*

bardy, &c. &c. The children of the emperor have the titles of archdukes and archduchesses. The emperor and his family profess the Catholic religion, which the empress, if of another creed, must adopt at her marriage. The royal residence is in the imperial castle at Vienna, and in summer in the neighbouring villas.

Classes of Society.] There are four classes of society recognized by the law, and enjoying very different privileges: viz. 1*st*, The clergy. The high clergy enjoy in the German States the right of representation in the provincial Diet, under the name of prelates; and in this respect form a caste in the State with which the prerogatives of nobility are united. The lower clergy do not participate in this right, but enjoy a few other prerogatives;[1] 2*d*, The nobility form the second, but most important class which everywhere, though with different privileges, enjoys a decided preponderance over the 3d and 4th classes. In the German States, where the nobles are classified into higher and lower nobility, they enjoy greater privileges, and possess an exclusive right to all the high court employments; 3*d*, The citizens enjoy essential privileges by law; they have their own magistrates, and have obtained immunity from several taxes; nevertheless, wealth and influence in this class is only found in the principal commercial towns. In the German States, there are two classes of citizens, immediate and mediate. The former take part in the representation, while the latter are governed by liege lords, and are frequently burdened with forced labour; 4*th*, The condition of the peasants has in latter times been very much ameliorated. In the German states, previous to 1781, there existed a class of free peasants, and a second much larger class, who enjoyed personal freedom, but were obliged to perform certain services to their landlord. This latter class Joseph II. released from bondage, and granted them the power of becoming proprietors of the soil. What the Austrian peasant, however, acquires, belongs truly and for ever to him, and he is protected by very strict laws against any oppression on the part of his landlord.

Administration.] Austria is composed of too many heterogeneous parts, to possess a perfectly equal administration; the highest authorities, however, reside at Vienna, and every business of any importance is referred to them. They are, 1*st*, The ministry of state, consisting of nine members; 2*d*, The council of state for the home department; and, 3*d*, The chancellery for foreign affairs. Several departments and chancelleries are placed under these three superior departments. In the German provinces, each district has its governor, who resides in the principal town. An exposition of the fundamental laws, according to which justice is administered, received the imperial sanction under the governments of Joseph II. and Francis II. For the German States, the

[1] In modern times, the prerogatives of the clergy have been greatly limited; and the Austrian laws for the government of the Catholic church are considered as well-adapted to prevent the usurpation of worldly power by the priests. The Catholic church of Austria considers the Pope as its chief in spiritual affairs; but is not so dependant on him as in other countries. The bulls and decretals of the Pope are only valid in Austria after they have been sanctioned by the monarch. The Roman church thus no longer forms an *imperium in imperio* in Austria, and the clergy contribute, like all other citizens, to the burdens of the State. They are in several instances subjected to the jurisdiction of the civil tribunals, and it is only under particular circumstances fixed by law that they are allowed to acquire landed property for churches and convents. The value of all the wealth possessed by the Austrian Catholic church may amount to 200 millions of florins, or 23,300,781*l*., reckoning the Austrian florin at 2*s*. 4*d*. There are in all the Austrian states 16 archbishops, and 70 bishops. The high clergy have in general very rich livings.

principal laws are the digest of the civil law promulgated by Francis II., in 1812, and the digest of the criminal code promulgated by Francis II., in 1804.

Finances.] The revenue of the Austrian empire, in time of peace, is not only sufficient to cover the expenses of the State, and to support the army, but also to pay the interest of the national debt. It may be estimated at 125 million of florins,[2] or £14,583,333, estimating the florin at 2*s.* 4*d.* The sources from which the revenue is drawn are the ground rent; different taxes and tolls; the regalia of salt, money, mines, and ports; and the royal domains. The expenses of the State are not known, but it is certain that the army costs more than one-third of the revenue. The emperor has a very considerable private fortune, which has no connexion with the State funds, and from which he defrays a part of his private expenses. The direction of the finances stands under the minister of the finances, with the aid of several officers.

Military Force.] The Austrian army amounts, in time of peace, to 270,000 men, and in time of war, to 650,000. The infantry consists of 30 battalions of grenadiers, each 800 men strong; 64 regiments of infantry, and 17 regiments of Bannat infantry, each regiment of 3 battalions, in time of peace 800 men strong; in time of war 6 battalions, each 1000 strong. To this body is added, in time of war, the *landwehr* militia, which serve as regular soldiery, 120,000 men strong, and the Hungarian Insurrection army, 50,000 strong. There are also 8 battalions of *jagers*, or riflemen, and 5 regiments of artillery, with a corresponding train of bombardiers, amounting in all to 20,000 men. The cavalry consists of 12 regiments of hussars, 800 men strong; 8 regiments of cuirassiers; 8 regiments of dragoons; and 4 regiments of lancers, all 800 men strong. These troops are recruited from the German, Polish, and Italian dominions, from which, however, Hungary is exempt, in conformity to its conscription. Private soldiers are still subject to flogging, and to the gantelope. The pay of a common soldier of the infantry is 6 kreutzers, or about 2*d.* *per diem*, from which he has to pay for his half

[2] It is difficult to fix with precision the exact amount of the annual revenue of Austria. Not one of all the statistical writers harmonizes with another on this subject. There is not even an agreement in stating the annual revenue of any specific province of the Austrian empire, and therefore we cannot expect any consistency of statement as to the totality. By Dr. Riesbeck, the total revenue is stated at 215,000,000 livres, or 10,700,000*l.*; and by Crome, it is fixed at 9,100,000*l.* annually. By Ockhart, it is stated at 110,000,000 florins. By Hoeck, at 100,000,000 florins. By the *Political Journal* of Frankfort, at 93,193,000 florins. By Normann, at 120,000,000 florins. By Liechtenstern, at 162,000,000 florins, nearly 19,000,000*l.* sterling; and Balbi states it to have been, in 1826, 350,000,000 francs, or above £14,510,000. This last, as being the latest, and made at a more settled period than some of the others, is in all probability nearest the truth. The above calculations, however, besides their mutual disagreement, are like the greatest part of those we meet with relative to the revenue, population, &c. of different foreign countries, little better than vague conjectures; and the truth of such computations, depends on such documents as few travellers or writers have the opportunity of examining, and indeed sometimes none such can be found. But if we cannot fix the amount of the revenue and expenditure, and how much the latter exceeded the former, during the late wars, we are still more in the dark as to the amount of the national debt of Austria. In Vienna, it was commonly said, in 1807–8, to exceed 80 millions sterling. If it was so then, it must have increased greatly since, and is even affirmed to amount at present to 150,000,000*l.* This sum, however, is not, strictly speaking, equal to half that amount, the greater part having been contracted in paper, at a time when that currency was depreciated to more than one-half, as in 1809, when the paper-florin fell to 1*s.* 2*d.*, and the low rate will be recollected by all at which that portion of it due to Great Britain was compounded for. Balbi's statement of the debt accords with these last mentioned circumstances better than any we have seen; he states it to have amounted, in 1826, to 1,460,000,000 francs, or £60,540,000.

pound of meat; with the rest of his aliment and furnishings, he is provided by government. The monthly pay of the officers is, for an ensign, £2 : 2s.; a foot captain, £7 : 8s. A colonel has £350 a-year, and a field marshal £1,600. The superior direction of the army lies in the hands of a council, called the *Hofkriegsrath*, which, in time of war, directs the military operations, and has often acted as a fatal check on the movements of the commanding generals. The whole empire is divided into 14 military governments; at the head of each stands a general, who is, at the same time, president of the military tribunal, from which an appeal lies to the court of appeal at Vienna. A new system of recruiting has been recently adopted. The reserve is wholly abolished; the liability to serve, which formerly commenced with the 20th year, and ended with the 40th, is now to commence with the 19th, and end with the 30th; the many exemptions which have hitherto been allowed are very considerably diminished; and only those students are to be exempt who distinguish themselves by application and progress in their studies. In Styria, however, the levy, according to the new system, has not operated successfully. The inhabitants of the province have refused to relinquish their privileges, according to which they are only bound to arm for the defence of their own territory.[3]

[3] The Austrian military have been long and proverbially noted for their firmness and perseverance under defeat; and when properly commanded, have been equally conspicuous for promptitude and vigour in offensive warfare. The inhabitants of the Austrian dominions are generally well-qualified for a military life, and seldom fail of making excellent soldiers. The Tyrolese, Hungarians, and Bohemians, have always been brave and warlike; whilst the Transylvanians, Croatians, and Slavonians, are in no respect inferior. The hardy mountaineers inhabiting the countries of Styria, Carniola, and Carinthia, are remarkably strong and robust, well-formed for bearing every kind of fatigue, and in personal courage are not inferior to any people in Europe. From these countries, Austria can levy numerous armies of robust and hardy warriors. It must be observed, however, that though Hungary, with Transylvania, contains as large a population as the Prussian monarchy ever did, and is much richer in every point of view, yet it has never supplied Austria with 100,000 men, in any war; and Prussia had, in 1806, a well-appointed army of 230,000 infantry, and 34,000 cavalry. One great reason of this lies in the nature of the Hungarian government, which is entirely a limited monarchy, or rather a powerful feudal aristocracy; and every measure which the court of Vienna may take against, or without the consent of the States, is deemed an infringement of the constitution, and consequently creates disgust in a people who never loved Germans. The Hungarian nobility, like their brethren of the same order in France, were exempted from all taxes, and claimed this exemption as a hereditary right, and an inviolable privilege. But in 1785, they were subjected to a land-tax in common with the other subjects of the Austrian empire; and as no levies could be made without their consent, nor supplies granted, this circumstance operated much against the house of Austria, in its struggles with the growing power of France. The Austrian army, however, next to that of France, became the most numerous and well-appointed in Europe, through the ceaseless exertions of the emperor Joseph II. Yet these exertions were in a great measure rendered nugatory, by a want of correspondence between the value of the machinery composing the army, and the hands appointed to guide it. This was glaringly manifested during the four successive wars of 1792, 1798, 1805, and 1809. In 1793, the Aulic council at Vienna, sent only 80,000 men to the Netherlands, when it ought to have sent at least 240,000 men; and might easily have done it, as there was no other frontier to defend. This force was by no means a match for the energies of a warlike nation, and the consequences were such as might have been expected. This army did nothing; both on account of its paucity, and because it was commanded by men who durst not take possession of a village, or pull down a mill, or a tree, without an estafette from the stupid council at Vienna. The hands of the superior officers were completely tied up; they had no discretionary power to act according to circumstances, and they were miserably furnished with supplies. In Italy, the same economical system prevailed, of sending armies disproportioned in numbers, to carry on with any prospect of success the arduous contest. Italy was lost; and Mantua, captured by Bonaparte, who destroyed three or four armies that had been successively sent by the Aulic council, in numbers exactly suited to Bonaparte's conveniency, so as to allow that ever active and vigilant general to devour them piecemeal.

CHAP. II.—THE KINGDOM OF GALICIA.

History.] THE kingdom of Galicia, or Austrian Poland, takes its name from the town and district of Halicz,[1] which in earlier times were duchies, and, with the greatest part of Red Russia, belonged to Hungary, but have been united since 1374 with Poland. It was on this ancient possession that Maria Theresa founded her claims in the first partition of Poland, when she enforced the cession of this province to Austria, and united it under the name of the kingdom of Galicia and Ludomeria, with her empire. The name of *Ludomeria* has not been used since the acquisition of Western Galicia.

Boundaries.] Galicia is bounded on the N. by the republic of Cracow and the kingdom of Poland; on the E. by Russia; on the S.E. by Moldavia; and on the S. and S.W. by Hungary. The surface is,

In 1805 particularly, the conduct of the Aulic council, in taking the chief command from the archduke Charles, who had the confidence of the army, and conferring it upon Mack, was glaringly absurd; and to complete the absurdity, even Mack's hands were tied up. He was ordered to occupy the line of the Iller, 200 miles beyond the Austrian frontier, with only 80,000 men, before a single Russian soldier had entered Germany; while Bonaparte was advancing at the head of 180,000 men, which, by the junction of the Bavarian and Wirtemberg troops, was increased to 220,000 men before the 1st of October. Mack, conscious of his impending danger, vainly desired of the Aulic council of war, permission to retire upon the Russian army, now rapidly advancing, and which promised to arrive at the Inn, by the 19th of October; or to file off towards Italy, to join the archduke Charles. He was forbidden to retire from the line of the Iller, but ordered to remain there till the Russians joined him; which this sagacious council assured him would take place before the French army could come up. Whilst these fooleries were going on, the terrible armies of France rushed like a whirlwind, upon Swabia, Franconia and Bavaria. Disregarding the neutrality of Prussia, this immense host of 220,000 men traversed Anspach, annihilated the army of Mack, at Ulm, and on the 15th of October, only the third day after firing the first shot, decided the fate of the war. Other causes besides the above, operated to produce defeat; such as, the want of combination in the generals; a blind deference to family rank, as was fatally experienced in 1800, by marshal Kray, who not being a man of family, or in the German style a *prince*, the Austrian officers murmured, and despised their general; also a strange deficiency in the tactical instructions promulgated by government, which were tediously minute concerning individual exercise, and extremely brief as to the movements of collected bodies. Another cause was the habitual slowness, and want of enterprise in the officers, who, accustomed to pursue the same tactics, from year to year, were much better calculated for executing the orders of a superior than for supplying any unexpected deficiency by their own resources.

The amount of the Austrian military force has been various at various periods; but has been progressive, ever since the days of Maria Theresa. The following is given by some authors, as the state of the Austrian army, at different periods of the monarchy:—

	Year	Men.
Under the emperor Ferdinand II. in	1629,	150,000
——— ——— Leopold I. —	1673,	60,000
——— ——— Joseph I. —	1706,	135,000
——— ——— Charles VI. —	1735,	150,000
Under the empress Maria Theresa —	1746,	200,000
Under the emperor Joseph II. —	1780,	300,000
——— ——— ———	1788,	361,000
——— ——— Francis II. —	1804,	370,945
War establishment,———	1805,	471,312
——— ——— ———	1809,	470,000

In the campaign of 1813, Austria brought 315,000 men to the field. In the campaign of 1815, the Austrian army consisted of 57 regiments of the line, 73 battalions of light infantry; in all, 430,000 infantry; 37 regiments of cavalry, making 60,000 horsemen; and 4 regiments of artillery, amounting to 13,000 men. Grand total, 503,000 men.

[1] The name of this province is sometimes written *Galizia*, and occasionally *Galitzia.*

according to Stein, 1,535 German, or about 33,000 British square miles, and according to Liechtenstern, 1,523 German square miles.

Physical Features.] Galicia spreads, on the north of the Crapack, gradually declining from a highland elevation into an immense plain. The Crapack runs on the boundaries of Hungary, and several branches stretch far into the country. The soil in the W. and N. is here and there marshy, and on the whole only of middling fertility; on the E. and S.E. it is very rich and productive.

Rivers.] Galicia touches upon no sea. To the basin of the Vistula, which runs on the boundaries between Cracovia and Poland, belong the Dunajetz, the Wislocca, the San, and the Bug.—The second principal river is the *Dniester*, to which belong the Stry and the Podhorze. It rises on the north side of the Crapack, near the source of the San; and after passing by Halicz, and receiving a multitude of tributary streams, principally from the Crapack, it enters the Russian territories, a little above Kstchin, where, along with the Podhorze, it forms the limit between Galicia and Russian Poland. Its whole course, through Galicia and the Buckowine, is upwards of 180 British miles. After entering the Russian territories, and passing by Kotchin, Mohilev, Soroka, and Bender, it falls into the Euxine at Akerman, or Bialogrod, having performed a comparative course of 500 miles. It is a still, deep, and slow running stream, unless when swelled by the melting of the snows upon the Crapack.—To the basin of the Danube belong the Pruth, the Sereth, and the Moldaw or Moldawa. There are no lakes, and only a few mineral springs. The Pruth rises in the eastern part of Galicia, on the north side of the Carpathian chain, and enters the Buckowine at Sniatyn; and then running a S.E. course through Moldavia, forms the present boundary between the Russian and Turkish territories, till it falls into the Danube, below Galatz, after a comparative course of near 400 British miles.

Climate.] The mean temperature at Lemberg is $7.\frac{5}{9}°$ of Reaumur or 48° of Fahrenheit; according to other observations, it is only 6.1° R. or 46° F. which is much less than at Prague, though lying under the same latitude. This difference is caused by the neighbourhood of the Crapacks.

Productions, Industry, &c.] The principal productions of Galicia are horses, cattle, game, corn, vegetables, fruit, wood, flax, and tobacco. The mines produce silver, iron, copper, lead, sulphur, coals, and salt. Although the soil is very favourable for agriculture, this branch of industry is very much neglected. Poverty and ignorance prevent the peasant from cultivating any more than what is just necessary for his subsistence, and the country is entirely dependant on the Jews, who generally buy the harvest while growing in the fields. The rearing of cattle too is sadly neglected. The noble Polish horse would prosper as well in Galicia as in the Ukraine and in Volhynia; but the breed here is small, except in the Buckowine, where there is an imperial stud. Game is plenty; but wolves and bears are still so numerous, that premiums are paid for their destruction. The forests are very considerable, and wood and potash are principal productions. Commerce is restricted to the natural productions of the country; but the importation is very great, and the balance stands against the country.

Population.] By the census of 1817, the population of Austrian Poland was returned at 3,716,692 souls. Stein stated it in 1826, at

4,102,733.[5] The inhabitants of Galicia are descended from two branches of the great Slavonian tribe: viz.—1*st*. Nearly the whole western part of Galicia is occupied by the *Poles*, who are divided into the two branches of *Mazuraks* and *Gorales*. The common people, in consequence of their ancient political bondage, are ignorant, idle, dirty, and oppressed in the highest degree. The lower nobility are scarcely to be distinguished from the peasants; but the higher nobility are very refined, and mostly receive German or French education. The language, dress, manners, and even diseases—among which the *plica polonica* is the most remarkable—are quite national. The Polish language, generally considered as very harsh, does not deserve such a reproach, particularly when heard from the lips of a Polish lady. Its grammatical construction is admirable; and numerous writers, during the last three centuries, have proved what eminence it is capable of attaining. The second branch is the *Rusniaks*, who again are divided into two branches: viz. *Pokutians*, the inhabitants of Southern Galicia; and *Red Russians*, the inhabitants of the plains, particularly towards the east of the San. The latter are a more dirty race than the former. Their character is a disgusting mixture of peculiar virtues and singular vices. Their language has merged into the Polish; but they have still a national dress. Besides these two principal races, there are a number of other tribes located in Galicia. Among these are about 200,000 Wlaches, who live in the circle of Czernowitz; nearly 422,000 Jews according to a census in 1817; 5,800 Armenians; 2,000 Gipsies in the Buckowine, and scattered over the whole kingdom; 550 Greeks; and 72,000 recent German settlers.

Religion.] The religion of the majority is Catholic, partly according to the Latin, and partly according to the Greek rites. The Wlaches and Gipsies belong to the Greek creed; and the Filippones, who, like the Huzzules, live on the boundaries, have joined the Greek confession; but the ceremonies of the first differ much from the Greek rites, and the latter have scarcely any religion whatever. The Jews have 294 synagogues; the Lutherans have 19, and the Calvinists 13 parishes.

Education.] Education and science are perhaps at a lower ebb in Galicia than in any of the other Austrian States. Most of the establishments for education have been formed only of late since the country came under the Austrian dominion. There is one university; several gymnasiums and high schools; and a considerable number of parochial schools.

Government.] Galicia is a kingdom indissolubly united with the Austrian monarchy, and the government is despotic. The States have only a very secondary influence in the legislation and taxation. There

[5] The population of Galicia and the Buckowine has been very variously estimated. At the first partition of Poland, in 1773, the population of Galicia was stated to be 2,580,000 souls. In 1780, its population was estimated by Schloetzer, a German journalist, at only 2,345,000. Hoeck, in 1801, fixed it at 2,797,119, and that of the Buckowine, at 130,000; total, 2,927,119; he likewise calculated the population of Western Galicia, then subject to Austria, at 1,106,178, which would have made the total Polish subjects of Austria even then amount to 4,033,297 souls. But the estimate of De Serres, who wrote in 1814, and at a time when Western Galicia was wrested from the Austrian sceptre, is prodigious, and certainly much exaggerated. He raises the population of Galicia to 4,850,000 souls, and that of the Buckowine to 250,000; total, 5,100,000; which is nearly a million more than the population of Eastern and Western Galicia united, double the estimate of 1773, and more than double that of Schloetzer, in 1780. Liechtenstern, in 1815, estimated the population of Galicia and the Buckowine at 3,645,000.

is a council of administration at Lemberg. The revenue, to which the salt-works and the domains of the emperor contribute most, amounts to about 10,000,000 of florins. Galicia has to supply recruits for 11 regiments of infantry, 4 of hulans, and a battalion of archers.

Topography.] Galicia is divided into 19 circles: viz. Lemberg, Zolkiez, Prflemyz, Rzeszow, Tarnow, Bochnia, Mysenice, Sandec, Jaslo, Sanok, Sambor, Stry, Brzezani, Zloczow, Tarnopol, Czortkow, Stanislawow, Kolomea, and Czernowitz, or the Buckowine.

Chief Towns.] The capital is Lemberg, on the Peltew, with 52,000 inhabitants in 1826, among whom are 12,730 Jews. There is a university here, with 26 professors, and a good library. It conducts an animated commerce, and has a celebrated fair, at which the nobility generally assemble. —Brody, a commercial town on the Sucha-Weilka, has 19,000 inhabitants, of whom one-third are Jews, who have here a college, a school, and a large synagogue. The commerce is here very animated.—Jaroslaw, with 6,978 inhabitants, has a large manufacture of broadcloth belonging to the government, and several other manufactures.—Tarnow, with 4,318 inhabitants, conducts an animated commerce.—Bochnia, with 3,109 inhabitants, possesses extensive salt-pits, which occupy 300 people, and furnish 250,000 cwts. per annum.—The salt-works of Wieliczka, discovered in 1548, if not the richest, are at least the most celebrated in Europe. They employ 900 workmen, and annually yield 300,000 cwts. of salt.[b] —At Saczawa, a town, with 5,069 inhabitants,

[b] We shall give our readers a short description of the mine of Wieliczka, in Mr. Coxe's own words, who visited it in person. "Upon our arrival at Wieliczka, we repaired to the mouth of the mine. Having fastened three separate hammocks in a circle round the great rope that is employed in drawing up the salt, we seated ourselves in a commodious manner, and were let down gently, without the least apprehension of danger, about 160 yards below the first layer of salt. Quitting our hammocks, we passed a long and gradual descent, sometimes through broad passages or galleries, capable of admitting several carriages abreast; sometimes down steps cut in the solid salt, which had the grandeur and the commodiousness of the staircase in a palace. Each of us carried a light, and several guides preceded us with lamps in their hands, the reflection of which upon the glittering sides of the mine was extremely beautiful; but did not cast that luminous splendour, compared by some travellers to the lustre of precious stones." "The mine," says he, "seems to be inexhaustible; its known breadth is 1,115 feet, its length 6,691 feet, and depth 743 feet; and it is supposed, with great probability, by the best judges, that this great body of salt branches out into various directions, whose extent cannot be known. of that part which has been perforated, the depth is only calculated as far as they have hitherto dug, and who can ascertain how much farther it may descend? Our guide did not omit pointing out to us several small chapels excavated in the salt, in which mass is said on certain days of the year: one of these chapels is above 30 feet long, and 25 feet broad; the altar, the crucifix, the ornaments of the church, the statues of several saints, are all carved out of the salt. Many of the excavations or chambers, whence the salt has been dug, are of an immense size; some are supported by timber, others by vast pillars of salt, which are left standing for that purpose; several of vast dimension, without any support in the middle: I remarked one of this sort, in particular, 80 feet in height, and so long and broad, as to appear almost, amid the subterraneous gloom, illimitable. The roofs of these vaults are not arched, but flat. The immense size of these chambers, together with the chapels above mentioned, and a few sheds, built for the horses, which are foddered below, probably gave rise to the exaggerated accounts of several travellers, that these mines contain several villages, inhabited by colonies of miners, who never see the light. That there is room for such purposes is certain; but the fact is, that the miners have no dwellings under ground; none of them remaining above eight hours below ground at a time, when they are relieved by others from above." Before the partition of Poland, the salt mines of Wieliczka yielded an average annual revenue of 3,500,000 florins Polish, or £205,000 sterling, to the king of Poland, and they have been worked above 600 years. What is the present amount of their annual revenue to the emperor of Austria we do not know; but they are said to have declined in value since that event. The salt is of an iron-gray colour, sometimes intermingled with white cubes, and sometimes large blocks of salt appear,

are the ruins of a castle, which was formerly the residence of the rulers of Moldavia, and 17 large churches.—Fontinalba, Klimoutz, and Dragomisna, are three villages, occupied by the Filippones, or Lippowanians, a peaceful, laborious, and sober tribe, from the Crimea, or Taurida, who took refuge here, under Joseph II., from the inroads of the Tartars. They amount to about 8,000. They employ themselves in cultivating hemp and flax, and making ropes. Czernowitz, the capital of the Buckowine, contains 5,460 inhabitants, and is the see of a Greek bishop.

CHAP. III.—THE HUNGARIAN STATES.

THE Hungarian States consist, 1st, of the kingdom of Hungary, with the provinces of Slavonia and Croatia; 2d, The principality of Transylvania; 3d, The Military frontiers; and 4th, The kingdom of Dalmatia. The whole of these countries together have a surface of 6,210.28 German, or 124,200 British square miles, with a population of 10,956,269.

I. THE KINGDOM OF HUNGARY.

Name and Extent.] The kingdom of Hungary was by the Romans called *Pannonia*. The present name was given to it in later times, when the Magyares or Madschares—who were called by the aboriginal natives *Huns*—appeared in Pannonia and conquered Hungary. The kingdom of Hungary, with the provinces of Slavonia and Croatia, lies between the parallels of 44° and 49° 46′ 26″ N. latitude; and between 32° 10′, the utmost western point of Hungarian Dalmatia, to the frontier of the Buckowine, in long. 41° E. of Ferro. Its extent, from the Save to the most northern bend of the Crapack, is 330 British miles; and from E. to W., or from the borders of the Buckowine, to the junction of the Danube and Moraw, above Presburg, 300 British miles; but in the southern parts, the extent is much more, being 350 miles from the junction of the Danube and Czerna, to Bukari, on the borders of Istria. It is bounded on the N.W. by Moravia; on the N.E. by Galicia; on the E. by Transylvania, on the S. by the military frontiers; on the S.W. by Illyria; and on the W. by Styria, and the land under the Ens. It is consequently entirely surrounded by Austrian States. The territorial extent, according to very recent calculation, is 4,169.1 German square miles. Lipsky estimates it at 4,118.06; Blumenbach at 4,006.06; Liechtenstern at 4,034.40; and Stein, whose calculations we have adopted in our comparative estimate of the extent and population of the different countries of this empire, at 4,180.23 German, or 89,875 British square miles.

History.] Pannonia, or Hungary, to the S. and W. of the Danube, was anciently inhabited by the Scordisci and Taurisci. When these tribes were subdued, and Pannonia was made a Roman province, it was divided into Upper and Lower, by the conquerors, who made the Raab the boundary between these two divisions. It was invaded by the Huns, A. D. 377. These fierce invaders were overthrown in 489 by

imbedded in marl. The purest sort is found at the bottom of the mine, and is sparry. The salt is of the same kind with that found in Marmaros, on the other side of the Carpathian mountains.

the Goths and Gepidæ, who in their turn yielded to the Longobards, in 526. When the latter conquerors marched upon Italy, the Avarians invaded the country, and extended their dominion into Bavaria; but they were conquered by Charlemagne, who forced them to profess Christianity. Towards the end of the 9th century, the *Magyares*—as they called themselves—or *Hungarians*—as they were called by their Slavonian neighbours—a Caucasian tribe, advanced from the Lower Ukraine and Moldavia, over the Crapacks or Carpaths, into Pannonia. They were about 1,000,000 in number, and were divided into seven confederated tribes. These invaders subdued the country, and reduced the ancient inhabitants, viz. the Slavonians, Bulgarians, Wlaches, and Romans, to slavery. Their principal chief, Arpad, took half the country to himself; and each of the other chiefs received a portion of the newly acquired territory.[7] Under Arpad's grandson, the duke Geysa, the devastating inroads of the Magyares on the countries towards the west and east, were put a stop to; and Geysa himself being baptized in 973, missionaries were received from the west, who spread the civilizing doctrines of Christianity throughout the country. Geysa's son, Saint Stephen, who, according to a custom of the times, had the hereditary royal dignity conferred upon him by the hands of the emperor Otto III. in the year 1000, gave a new form to the ecclesiastical and political institutions of the country. He divided the whole country into 72 *comitatus* or counties; and invested the highest public officer, viz. the *comes*, count, or *graf*, with the superior civil and military command. He also founded 10 bishoprics, and organized a kind of national representation; in which, however, only the higher officers of the State, and the immediate vassals of the king had a place. The troubles which ensued after Stephen's death in 1038, furnished the German emperors with a pretext for interfering in the internal policy of Hungary; and king Peter was forced in 1044 to accept of his inheritance as a fief of Germany. This yoke was however shaken off in 1063; and under Saint Wladislaw and his successor, Koloman, civil harmony was restored, and the countries of Croatia and Dalmatia were united with the kingdom. About A.D. 1155 several thousands of colonists from Lower Germany, and Flanders, came to Hungary and Transylvania; and Geysa III. permitted them to preserve among themselves their German constitution. Andreas II. gave in 1222, a kind of national charter, which was confirmed and enlarged in 1234. In

[7] Whether the *Oygurs, Yugurs,* or *Vigurs,* were of the same stem with the Huns, cannot now be determined. It is certain that these latter were called *Ugres,* by Procopius, in the 6th century; but there is little or no doubt, that they were the same people with the *Vigurs,* in the time of Jenghiz Khan, who were the only horde, of all the innumerable tribes that composed the army of the great Tartar conqueror, that had an alphabet, and were employed by that personage as his secretaries: they furnished the Monguls not only with science and learning, but even with the use of letters; and at that time inhabited the eastern part of the Lesser Buckharia. The *Avars* or *Avarians* were the same with the *Khozars* or *Khozari* of the Arabian historians, and the *Kahzares* of the Byzantine writers; and a tribe of the Lesgi, called *Avari,* still exists on the eastern slope of Caucasus, whose chief is called the *Avar-khan,* and whose language bears at least a remote affinity to that of the Ostiaks, which latter is a dialect of the Hungarian, or Finnish. Previous to the settlement of the Madschars in Hungary, they inhabited the country now occupied by the Bashkirs, and named *Basejert,* by the Nubian geographer. The ruins of the city Madschar, are still to be seen on the east of the Wolga, in the Steppe of Astracan, and were very lately visited by Klaproth, the German mineralogist, in his tour to explore the Caucasus. A Sarmatian tribe, denominated the *Comani,* settled also in Hungary, in the twelfth century; and a district between the Theiss and the Danube still bears the same name.

1301, the family of the Arpadians was extinguished with Andreas III. He was succeeded by several kings of different families; among whom Lewis the Great possessed also the Polish crown, which after his death devolved on his daughter, who married the duke Jagellon of Lithuania, and united Red Russia, Moldavia, and Wallachia, also with the crown of Hungary. Sigismond, who was elevated to the throne in 1387, by election, was opposed by a powerful party, now the more dangerous since the Turks had begun to attack the kingdom. Red Russia, Podolia, and Wallachia were seized at this juncture by the Poles, and Dalmatia by the Venetians; and Sigismond was further obliged to pledge 13 of his towns to the Poles The Hungarian Diet now consisted of prelates, barons, lower nobility, and deputies from the towns. The two first were called by way of eminence, *magnats.* Sigismond was succeeded in 1437 by his daughter Elizabeth, who married the emperor Albert II., with whom she shared the Hungarian crown. The governor of Transylvania, the gallant Johan Hunyad, a natural son of Sigismond, was regent during the minority of Ladislas, Albert's posthumous son. When Ladislas himself assumed the reins of government, Hunyad supported him by his counsels, and lent energy to all his measures, by his great influence and personal bravery. But after the death of that noble-minded man in 1456, the ungrateful monarch listening to the advice of evil counsellors, caused the eldest son of his friend to be beheaded in 1457, and threw the younger into prison. The weak-minded Ladislas died a few months after this infamous transaction, and the gallant Matthias Corvin, then only sixteen years of age, was called out of prison, and on the 24th of January, 1458, elected king by the nation. Matthias was a hero of the noblest rank. He patronized the sciences, and promoted the welfare of his people by every means in his power, at the same time that he aggrandized the kingdom, and kept his dangerous neighbours in check. In the war with the emperor Frederic II. he entered Styria, Carinthia, and Carniola, and at last Vienna itself. He founded a university, established a considerable library, and invited various learned men, artists, and printers, from Italy into his country. He died on the 6th of April, 1490, without legitimate heirs; and Wladislas of Bohemia, after subscribing certain very humbling conditions, received the crown of Hungary from the hands of the nobles that same year. Austria in 1491, resumed possession of Vienna and the other provinces conquered by Matthias. The prospects of succession to the Hungarian crown which now opened up to Austria were favoured by the nation at large, and the weak Wladislas beheld in silence the power of the Magnats daily increasing. Moravia and Lusatia were now torn from the kingdom; Venice took possession of several towns in Dalmatia; and Moldavia came under Polish sovereignty. Wladislas was succeeded in 1516 by his son Lewis II. under whom the troubles excited by the Magnats, or higher nobility, headed by John Zapolya, gathered fresh strength, while the country was at the same moment invaded by the Turks, against whom Lewis fell in the battle of Mohacz in 1526, when Sabacz, Belgrade, and the whole of Servia and Hungary as far as the Raab were devastated by the conquerors. John Zapolya was thereupon elected king; while Stephen Bathory, another Magnat, proclaimed Ferdinand I. of Austria, Lewis' brother-in-law, king of Hungary. John nevertheless maintained himself on the throne, but was obliged to leave the best part of Hungary with Buda in the hands of the Turks, in whose possession they remained until the peace of Carlo-

witz in 1699, when Leopold I. again got possession of them. From this period Hungary has remained united with the Austrian empire, and its history has been detailed in the general sketch we have given of the history of the house of Austria.

Physical Features.] The N. and W. side of Hungary are very mountainous. The Crapacks run not merely as a boundary on those sides from the Sudetes to the Danube, but stretch several branches into the country on the W. Several branches of the Alps run down to the Danube, whence they begin to flatten. Croatia is covered with branches of the Julian Alps. An immense plain comprehending all Eastern Hungary, lies between the Danube and the Transylvanian mountains. It is the basin of the Theiss, and has an extent of above 20,000 square miles. Between the Danube and the Theiss there is a great extent of marshy ground, while the drier districts are sandy, and frequently covered with moving sands, said to contain marine shells. Here and there are found miserable villages, affording a shelter to the herdsmen who watch the cattle in the pastures. Another large plain, of a triangular form, runs from the St. Gothard on the boundaries of Styria, to the mountains of Barich. Dr. Brown, who travelled from Vienna to Belgrade, a distance of more than 400 road miles, says, that he did not discover a single eminence the whole way, nothing but one continued level appearing to his view; indeed Hungary itself may be considered as a great oval plain, surrounded on all sides but the south by lofty mountains, whence numerous and large rivers have their source, which, though rapid at the outset of their courses, gradually decline in velocity as they approach the great Hungarian plain, where, owing to the extreme flatness of the surface, and looseness of the soil, their currents are scarce perceptible, and are subjected to frequent changes in their direction.

Mountains.] Upon inspecting the map of the Austrian dominions, it will be seen at one glance, that the Crapack, or grand Carpathian chain, is an elongation of the great mountainous belt that commences at the outlet of the Elbe into Saxony, runs along the N.E. of Bohemia and Moravia, forms the southern border of Austrian Silesia—whence a lateral ridge strikes off to the south, dividing Moravia from Upper Hungary—and then running almost due E. separates Austrian Poland from the great vale that is watered by the Danube and its numerous tributary streams. It is at the point where the lateral ridge commences, while the grand chain continues its eastern direction, that it obtains the German appellation of the *Crapack*,—probably its original name softened by the Roman enunciation. This enormous ridge has been celebrated from remote antiquity; but, unlike the Alps of Italy and Switzerland, it has not yet been minutely explored by the eye of science; and no skilful orologist, like Saussure, has yet ascended its summits, traversed its valleys, explored its recesses, or examined its strata. Hence it is, that though the general direction of this great chain is known, yet no accurate description of its different bearings, or occasional changes of direction, its lateral ridges, or its principal summits, with their respective altitudes, has yet been given to the public. The highest points of the Carpathian chain belong to Hungary, and occur in the ridge called Tatra. The lower chains belonging to the same system are, 1st, the Tatra, or the Hungarian Metallic mountains; 2d, the Matra, a low porphyritic ridge in Middle Hungary; 3d, the Eastern

Hungarian mountains, with rich gold ores; and 4th, the mountains of the Bannat.[8]

Rivers.] Hungary does not border upon any sea; but is watered by very large rivers. The principal is the Danube, to the basin of which all the others, except the Poprad, belong. The level of the Danube at Presburg is 330 feet; at Raab, 272; at Buda, 229; and near Orsova, 140 feet. Its principal tributaries are the Leitha, the Raab, the Waag or Vag, the Gran, the Drave, the Save, and the Theiss or Tisza. This last-mentioned stream is the largest of all the tributary rivers of the Danube. It rises on the confines of Pocutia; and after receiving into its

[8] I must premise the following account by stating that Wahlenberg's description does not comprehend all the Carpathian range, but only the N.W. portion of it, extending from N. lat. 48° 55′ to 49° 15′, and 1½° of longitude, which was all the portion he was enabled to explore. The rest of the elevations mentioned below are from Balbi. The farthest west range of the Carpathians is denominated Tatra. It runs N. and S., and is divided into two by the Waag river, which passes through it. The following are the highest peaks, according to Wahlenberg, given in English feet, though originally in French, by Wahlenberg himself:—

Krivan,	5648	Czerny, Camen,	4583
Coch,	5196	Kluckberg,	4442

East of Tatra, a chain of mountains runs in that direction till it terminates in the Great Carpathian Alps. The highest of this chain is Chocs, 5236 feet above the sea. About 12 miles E. of Chocs the great Eastern Alps begin. This chain is, in fact, only one great mountain, about 24 miles long, by 10 broad. Towards the W. the high portion is much narrower than towards the E., and the highest elevations of all are towards the eastern end. This immense mountain mass contains various plains and vallies, and a good many lakes are to be found in it. To this mass the inhabitants have given the denomination of Tatra, or the Hideous, from its singularly dreary aspect. The following are the most remarkable peaks belonging to it, as measured by Wahlenberg:—

	Eng. Feet.		Eng. Feet.
Great Lomnitzer Spitzi	8464	Handsdorfr Spitzi	8313
Csabi	8313	Viszoka	8313
Krivan	8034	Givlsdorf Ressel	7780
Rothesecthurm	7673	Hintere Leithen	6591
Stirnberg	6287	The Lake Hinzka	6319
Nod Pavlova	5942	Nochstein	4984

On the south side of the Waag is a smaller range, running parallel to the Great Tatra, the highest of which is Djumbier, 6576 feet above the level of the sea. The central and highest parts of these mountains, consist of granite, composed of quartz and milk-white feldspar, with very little mica. At a lower level, gray wacke and transition limestone, appear. The latter is most abundant on the north side of the mountain, but seems to be nearly wanting on the south side.

From the level of the Danube to the summit of the Carpathians, Hungary presents five zones or belts, rising successively. 1. The plains rich in corn, and fruit trees, extending to the first hills, or nearly 1500 feet above the sea. 2. The woody region, or the region where the oak, beech, and chesnut thrive. The termination of the beech is at the height of 4194 feet above the sea. This region is richer in plants than the same region in the Alps of Switzerland. 3. The Sub-Alpine region commences where the beech terminates, and where the pinus abies, or Scotch fir, begins, and exhibits nearly the same plants as in Switzerland. But as we ascend this region, a striking difference takes place. The gloomy and useless moss pine begins to cover the ground at 4476 feet above the sea, and the Scotch fir terminates at an elevation of 4902 feet, whereas in the same region in Switzerland, the Scotch fir vegetates at the height of 5862 feet above the sea, or 960 feet higher than on the Carpathian mountains. 4. The lower Alpine region, or that of the moss pine, extends from the termination of the Scotch fir, to where the moss plant rises only to the height of 2 feet in open places. This region abounds in moss pines, under whose shade large and fine plants grow and thrive at a greater elevation than do the same in the Alps of Switzerland; where the moss pines do not appear, the earth is barren, and produces a few mountain blue-bells and other small flowers. The upper boundary of this region is 5968 feet above the sea. But in particular places among the stones, the muglius is seen penetrating the soil, at an elevation of 6394 feet above the sea. 5. The superior Alpine region commences where the muglius terminates, at 5968 feet, and continues to the highest peak of the Carpathians. All large vegetables disappear at this elevation. This region

channel the waters of the Zamos, from Transylvania; and the Toreza, the Latoreza, the Bodrog, and the Ung, all descending from the southern side of the Crapack, it joins the Marosch, a Transylvanian stream, at Segedin, when the united streams after a comparative course of 70 miles, fall into the Danube, opposite Salankaman. The whole comparative course of the Theiss is 350 British miles. It is a very winding stream, and abounds to a proverb in fish.

Canals.] There are two large navigable canals in this country, viz.: The Francis canal, between the Danube and the Theiss; and the Bega canal extending from Facset to Becskerek.

has a most barren and dreary aspect, being in great part covered with naked stones, and the rocks with dark lichens. A few plants, as the dwarf primrose, mountain blue-bell, gentian, and dwarf saw-worth, and other diminutive plants may be seen here and there, and the last was found in great abundance at Kalbachergrat by Wahlenberg, being an elevation of 7141 feet above the sea. What is surprising, none of the Carpathians are covered with perpetual snow, not even the peak of Lomnitz, though in the latitude of 49° 11'. Wahlenberg endeavours to account for this anomaly, by the prevalence of the hot winds from the plains of Hungary, which are the most extensive in the south of Europe, and where the summer heats are very great. The following are the elevations of the other Carpathian mountains, from Balbi:—

	Eng. Feet.		*Eng. Feet.*
Ruska, Poyana	9912	Mediasch, (Transylvania)	710
Gailuripi	9594	Ucnokar	7878
Buthest (Transylvania)	8698	Lentschitz	8466
Buthest (Wallachia)	6892	Pietrosz	7274
Retirzath (High Valley)	8507	Presiba	6423
Czerna Gova	5116	Babia Gova	5786
Budislaw (Eastern Carpathians)	7974	Green Lake	5017
Surat (Do. do.)	7594	Fichsee	4807
Mount Calvary, near Schemnitz, (by Esmark)	4907	Kukuratzo	4988
		Schemnitz, mining town of	2172
Kroonstadt, city of, in Transylvania	2020	Gyongos, in Upper Hungary	620
Schasburg, (Transylvania)	940	Tokay, Do.	470
Erlaw or Agria, Upper Hungary	720	Semlin	290

The elevation of the Carpathians to the N.E. of the Tatra, in the counties of Urgh, Beregh, and Marmarosh, according to Kitaibel, who examined them, are equally lofty with the Tatra, examined by Wahlenberg, those especially on the frontiers of Galicia and the Buckowine, but they are not so steep as the Tatra, nor covered with so many huge and bare rocks; they rest on a broader base, and their summits are not so sharp nor pointed. The Carpathians to the E. and S. of Transylvania have not yet been explored, nor their elevations taken.

There are a number of passes in the Carpathian system, which may be easily defended against invading armies. The pass of Jablunkawer, leads south from Austrian Silesia into Upper Hungary.—Another noted pass is at the source of the Theiss, and leads into Pocutia and the Buckowine.—The third pass is at the source of the Bistriza, and leads into the Buckowine from Transylvania.—The fourth pass is at the source of the Alauta; it leads into Moldavia, and is called the gate of Ghemis.—The fifth pass is at the source of Czick, a mountain-torrent that falls into the Alauta.—The sixth is the Vulcaner pass.—The seventh is the Buzzanner pass, a few miles to the S.E. of Kronstat, leading into Wallachia.—The eighth is the pass of the Red Tower, to the S.E. of Hermanstadt, described by Dr. Clarke, presenting truly Alpine scenery; and where the rapid Alauta, after many turnings and windings among tremendous snowy cliffs narrowing its channel, at last escapes through rugged defiles, and enters the Wallachian plains.—The ninth pass leads through the Irongate branch into the Bannat of Temeswar, and is called the grotto of Veterani. These passes are all well-fortified, to prevent the entrance of the Turks into Transylvania and the Bannat; but several of these passes were nevertheless forced by the Turks, who blew up the grotto of Veterani, in the campaign of 1788.—Another pass named the Deva, leads from Transylvania to the Bannat, on the south; and the last pass worthy of notice is in the western chain leading into Upper Hungary, by way of the river Keres, or Creus, which must be crossed no less than thirty times, during its passage through the chain, before the traveller can enter the Hungarian plains. The whole extent of the Crapack mountains, beginning at Presburg, and running thence N.E. and then S.E., and afterwards S.W., till we arrive at the Bannat of Temeswar, cannot be less than 900 British miles, including the whole circuit that encloses Transylvania.

Lakes.] There are many lakes in this country, and among these some which are reckoned among the largest in Europe. The Plattensee, or Balaton, near the centre of Lower Hungary, is about 45 miles in length, and 8 in breadth. It is surrounded by rich pasture-lands, from which rise several insulated basaltic hills. The Neusiedlersee, on the frontier of Lower Austria, is a salt water lake of about 60 square miles in superficies, and is surrounded by fens. There are a great number of mineral springs.

Soil.] There is as great a diversity of soil as of surface in Hungary. It is very sterile on the highlands; but improves in quality as the elevation lessens, and is luxuriously rich on the plains. Yet even here there occur, in the most fertile tracts, barren heaths of several miles' extent, in which not a stone, or tree, or shrub, or living creature appears to relieve the eye.

Climate.] The climate is very different according to the level above the sea and the different latitudes. In the valleys, snow falls as early as September, and seldom disappears before the middle of June; while in the southern districts it seldom lies above a fortnight. On the whole, however, the climate of Hungary is warmer than that of Germany; and even under the 48th parallel the finest species of grapes which Europe possesses, the Tokai or Tokay, thrives amazingly. The finest countries of Hungary are the middle regions and the terraces of the Crapacks, where the air is most healthy and pure. The flat country is unhealthy, particularly to foreigners, although the ancient proverb which represents Hungary as the grave of Germans must be received with great exceptions.

Productions.] Hungary produces game, corn, Turkish corn, rice, flax, hemp, fruit, wood, all kinds of metal except tin and platina, salt, marble, chalcedon, serpentine, crystals, sulphur, coals, peat, and naphtha. Hungary has in all ages been famous for its breed of horses, which are generally mouse-coloured, and highly esteemed by military men. There is a remarkable breed of large rams in the neighbourhood of Presburg. About 100,000 head of black cattle are annually exported to Germany; and in the town of Sopron, 40,000 horned cattle, 150,000 hogs, 2,300 cwt. of honey, and £28,000 sterling worth of wine, are annually sold. The soil along the banks of the rivers, and in the plains of Upper and Lower Hungary, is unrivalled for fertility; and their exuberant meadows and fat pastures feed vast numbers of live stock, whilst the rivers swarm with fish. The Hungarian and Transylvanian forests cover a space of 7,452,230 acres, or 11,644 British square miles.

Wines.] The wines of Hungary are celebrated all over Europe, and are preferred by some amateurs to all other wines. Hungary contains numerous vineyards; but they are chiefly in the hands of the peasantry, who pay no attention to the manufacture of wines. The Tokay wine, however, is highly celebrated for its excellence. It is the produce of a tract of various vineyards in the district of country which extends 25 or 30 miles to the N.W. of Tokay. It was not till about the year 1650 that the produce of these vineyards came into vogue, in consequence of the method adopted of preparing them from picked and half-dried grapes, on which the luscious quality of this wine depends. The whole quantity annually made consists of 80,000 casks, containing about 14 gallons each. Tokay

is remarkably durable, and, like all sweet wines, it requires to be kept a long time, until it loses somewhat of its luscious taste, and the flavour begins to preponderate. It is accordingly kept a long time; and in Poland and Silesia, where it is in great demand, the oldest only is drunk. At Cracow, some vintages are said to have been kept a whole century. In this state it is called *vino vitrawno*, to distinguish it from the new and sweet, *vino slotki*, and sells generally at from four to six, and in some instances as high as eight ducats, or four guineas the bottle. The whole of the wine annually produced in Hungary, is estimated at 18,230,000 umers, or 582,360,000 quarts; and the whole extent of the vineyards at 851,690 acres, or 1330 British square miles. The Hungarian wines were deemed by the council of Trent and by his Holiness himself, superior to any in Italy or France.

Mines of Schemnitz and Cremnitz.] As to metals and minerals, Hungary abounds more in these than any country in Europe. Indeed it may be said, that, with the exception of Saxony, the mineralogy of the Austrian dominions in general is by far the most various and interesting of any in Europe. About 40 miles to the south of the Crapack, are the gold and silver mines of Cremnitz; and 20 English miles farther to the south, are the silver mines of Schemnitz. The gold mine at Cremnitz has been wrought for 1000 years and upwards, and was the richest of the seven gold mines in that quarter. Pieces of pure gold have been found in this mine as broad as the palm of one's hand. Some of the silver-ore is so rich as to be cut with a penknife, and most of it is impregnated with gold. At Cremnitz there is a mint, where the gold is coined into ducats of the value of about half-a-guinea. To this mint all the mine-towns of Hungary and Transylvania send their gold and silver to be coined. The number of persons employed in the government mines at Cremnitz, is, 1,500, and an equal number of miners are employed by private proprietors.—The mines of Schemnitz are so rich, says Clarke, that in one week of the year 1763, the proprietors obtained 1763 marks of silver, or £3,426 sterling. This quantity was produced from the third and fourth veins; and from the fifth vein was obtained 700 marks of silver, in the course of fourteen days; eight men having sunk a shaft into the same vein, realized, in fifteen days, the sum of 80,000 florins, or £9000 sterling. The number of miners employed by the crown at Schemnitz, is 8000; and 17,000 more are employed by private proprietors. The stamping works at Schemnitz, contain 1000 hammers, each stamping 3 quintals, or 300 lb. weight of ore daily. The district productive of the precious metals contains five great parallel veins, running E. and W. and dipping at an angle of 80°. In these veins, consisting chiefly of feldspar, varying from 60 to 120 feet in thickness, and connected with each other by small irregular branches, is found the metallic ore, forming veins from 4 to 10 inches in thickness, and druses lined with crystals of the metal, quartz, and calcareous spar. The veins have been wrought to the depth of 1800 feet.[9]

[9] "All the imperial mines," says Dr. Clarke, in his account of those at Schemnitz, "have a connexion with each other, offering in their whole length, a subterraneous passage of 3000 fathoms, or three and a half miles. The view of the interior of the Paquer Stohln, convinced us that there are no other mines in the world like those of Hungary. We descended," says our traveller, "one hundred and eighty yards, and were then conducted by levels as airy and spacious as the corridors of a fine theatre, to different parts of the mine, where the labourers were working the ore. How wretched, in comparison, appear the mines of Wales and Cornwall, where it is sometimes neces-

Hungarian Opal.] A mineral peculiar to Hungary, is the opal,—a gem preferred to all others by the oriental nations. The opal-mines are situated at Czernwenicza, a short day's journey to the north of Kaschau, and nearly under the same latitude as Cremnitz. The hill in which the opals are found consists of a decomposed porphyry, and the gems occur at the distance of a few fathoms from the surface. They are of various qualities, from the opaque white, or semi-opal—which is also discovered in Cornwall—to the utmost effulgence of those iridiscent colours which distinguish this noble gem.

Agriculture.] Hungary is a very fertile country. Nevertheless, most branches of agriculture are still in their infancy here. According to a calculation by Grellmann—but which is founded upon very imperfect surveys of the country—about two-thirds only of the surface are in cultivation. Gardening is pretty well attended to, and no country is better adapted to the growing of fruit than Hungary, though, with the exception of prunes, very little is cultivated. Hemp, flax, poppies, and tobacco, are cultivated on a large scale, particularly the latter, which forms a staple ware, of which 200,000 cwts. are annually exported. The breed of sheep has been greatly improved in the western districts of the country, by crossing with merinoes. In some places, an attempt has been made to rear silk-worms, and the mulberry-tree grows very well.

Manufactures.] The manufactures of Hungary are yet in their infancy. Neither the Slavonians nor the Magyars are fond of manufacturing occupations; and, indeed, manufactures can hardly prosper in a country whose raw produce is so easily sold to the neighbouring States. The only article manufactured for exportation is leather.

Commerce.] The commerce of Hungary is very important, having so many valuable productions to bring into the foreign market; and the balance would stand greatly to its advantage, if the Austrian system of taxation did not check the free operations of commerce. Hungary is treated like a colony, and surrounded on all sides with tax-offices, and custom-houses. The principal markets for Hungary, besides the Austrian States, are Silesia, Poland, Italy, and the Turkish empire. Fiume may, in a certain sense, be considered as the sea-port of Hungary,—though not belonging to it—as the communication with it is greatly facilitated by good roads. The centre of the interior commerce is Pest, where there are four great annual fairs held. The water-carriage on the navigable rivers and canals greatly facilitates commerce.

Population] Blumenbach, in 1816, stated the population of Hungary, including Slavonia and Croatia, at 8,200,000; Liechtenstern fixes it at 7,800,000; Czaplowicz, a Hungarian writer, states it to have amounted,

sary to creep upon our hands and knees, wet through, over all sorts of rubbish, in order to pass a level from one shaft to another. Even the ancient mines of Sweden are inferior, when compared with those of Schemnitz. The mode of descent into our English mines is always difficult, and almost always dangerous; but the inside of a Hungarian mine may be compared to the interior arrangement of one of our best built frigates, where space has been so husbanded, and cleanliness so strictly maintained, that nothing is seen out of its place, and room sufficient for every operation is left." The gold washings on the Drave at the confines of Croatia, Hungary, and Styria, still produce 1200 marks, or 600 lbs. of gold, and more than 12,000 marks are still obtained from the gold washings on the rivers in the Bannat of Temeswar. The annual produce of iron in the same district, is 694,000 cwt.; 34,000 cwt. of copper of a superior quality are annually produced in Hungary. The produce of mineral salt is immense, and the annual revenue derived by government from that mineral has been estimated at 10,000,000 florins.

according to a census taken in 1820, to 8,643,627; and Stein states it to have amounted in 1826, to 8,700,000. It cannot at present be under 9,000,000. This population is dispersed throughout 48 royal or episcopal towns, 699 boroughs, and 10,852 villages and hamlets. Stein furnishes the following facts respecting the different races of the population.

1*st.* *The Magyars.*] The Hungarians, or Magyars, though the ruling are not the most numerous nation, as they do not exceed 3,000,000. They call the country, in their own language, *Magyar-Ország*, or 'the land of the Magyars.' They are a handsome, high-minded, vigorous race, distinguished by a fiery, upright, and open character, great patriotism, and Asiatic hospitality. The whole character of the Magyars is one of activity and cheerfulness: this distinguishing trait appears in their vices, as well as virtues; in their manners, their national dress, and their dances. Since 1806, their language—of which we shall speak afterwards—has been adopted in the tribunals and public transactions, and will probably supersede the Latin, which is still very generally understood in this country, even by the lower classes. Of a kindred race are the *Kumanes*, or *Comani*, a remnant of the Petschenegri, numbering about 70,000, and the *Jazyges*, whose numbers do not exceed 45,000 The Magyars occupy the finest part of Hungary.

2*d.* *The Slavonians.*] The Slavonians are the second in rank, and the most numerous tribe in this country. They amount to about 4,050,000, and consist of several tribes, of which each speaks its own dialect. They may be divided into the *Slawaks*, who are chiefly located in the west of Hungary, and to whom belong the *Kopaniczares*, the colossal inhabitants of the Crapacks; the *Croates*, or *Croatians*, in Croatia Proper, and the S.W. of Hungary, a rude and uncivilized, but industrious and harmless people, speaking the Illyro-Croatian dialect; and the *Serbes*, and *Raizes*, mostly in Slavonia, the Bannat, and the S.E. of Hungary, speaking a Wlakish dialect. Besides these tribes, there live on the Crapacks a considerable body of *Rusniaks*, with whom Schwartner classes about 22,000 Vandals, located in the county of Eisenburg, though other geographers have classed them with the German.

The Germans.] The German denizens, whom Geysa received into the kingdom in 1143, now amount to about 577,000. They have preserved their language and national character in the midst of Slavonians and Magyars, and are, without doubt, the most industrious and civilized tribe in the whole kingdom.

These are the principal tribes, but besides these there are about 640,000 Wlaches dispersed over the whole country as herdsmen and waggoners; the Jews amount to about 130,000; and the Gipsies to 45,000. The resident Armenians, who are the best farmers and cattle merchants in Hungary, the Greeks, or Macedonian merchants, the Lithuanian colonists in the Bannat, and the Arnauts, occupying two villages, may all together amount to 8000 souls.

Religion.] According to the letter of the law there is no established religion in Hungary, although the majority of the inhabitants are Catholics. But the influence of the clergy, and the undefined expressions of the law, cause the other religious creeds to be virtually regarded as merely tolerated. According to Czaplovicz, the number of Catholics, with the United Greeks who acknowledge the supremacy of the pope, and the Armenians, is 5,392,395; the Greeks amount to 1,097,800;

the Calvinists to 1,285,816; the Lutherans to 822,989; and the Jews to 150,000. Though the population has increased since the above enumeration was made, it is probable the different sects still subsist in nearly the same proportions.

Hungarian Language and Literature.] The language of the Magyars is a very remarkable one, and throws much light on the study of history. It is one of the youngest of the living languages which have come from Asia to Europe, and as such has preserved many traits of its oriental origin. The Magyars belonged originally to the Finns, an Uralian race, which extended in early ages from the S.W. of Asia on the Caspian Sea, to the extreme N.E. of Europe; and their language is derived from the primitive tongue of this tribe. The Hungarian language is written with Roman characters, and the different pronunciation of the vowels is marked by accents. It is very harmonious, and has something magnificent in its sounds. Among the numerous grammars of the Magyarian language, the first was written by James Pannonius in the 15th century, but was afterwards lost. The first which appeared in print was by John Sylvester, or Erdösi, in 1539. A society of learned men published one at Vienna in 1795. The most complete grammar, however, which seems to have been written with great philological skill, is one the publication of which was begun by Nicolas Révai at Pest in 1809, but has not yet been completed. The most useful for a person wishing to learn the language is one by Joseph Marton, of which the latest edition appeared at Vienna in 1820. There are many dictionaries of the language by Pesti, Verantius, Megiserus, Pariz, Papai, &c. A new one in Hungarian and Latin was published within these few years by Benjamin Mokry.

The civilization of the Magyars made very early progress; and their literature deserves a much greater attention than has yet been bestowed upon it by other nations. In the 11th century a number of schools were established in the convents; and in the 12th century it was customary for the young Hungarians, particularly those who were destined to be priests, to attend the newly formed university at Paris. In the beginning of the 13th century, a college, or *studium generale*, was established at Wessprim in Hungary, in imitation of the university at Paris, in which chairs were founded for all the liberal arts, and for theology and law. In the 16th and 17th centuries schools and colleges increased in Hungary. With the 14th century, the Latin language began to exercise that sway in Hungary which it then did in all the civilized countries of Europe; but it has maintained its supremacy in this country almost to our own times. Hungary and Transylvania have produced many excellent writers in this language, although from very ancient times chronicles and annals were kept in the native language. After the close of the 15th century there appeared as historians Tubero, Zermeagh, Istvanfi, and Tzentivángi. In medicine, natural philosophy, and natural history, Clusius, Koeleseri, Poda, Horvath, were distinguished names; in the philosophical and mathematical sciences, Petrus de Dacia, Berengi, and Mako; and in poetry and rhetoric, James Pannonius, Olahus, Bekengi, Revai, and Carlooszky. Under the kings of the house of Anjou, the language of the country and the national literature assumed a greater degree of importance. Deeds and letters now began to be written in the Hungarian language, and a translation of the Bible was also executed in the vernacular tongue. But it was not till the 16th century, under the government of Ferdinand I., and Maximilian, that the fairest flowers of

national literature blossomed. The religious disputes which with the Reformation had penetrated into Hungary, accustomed the people to think in their own language, while the sacred poetry which was now introduced into religious services greatly enriched and refined the dialect. The study of national history was now excited and assisted by the chronicles of Szekely published in 1559, of Heltai in 1572, and of Bartha in 1664. Translations of the Bible by Komjáti, Telegyházi, and Kormároni now appeared; and many celebrated preachers were trained in this period, whose writings would suffer no loss from a comparison with those of the most celebrated theologians of their age, as Gaal, Kultsár, Telegdi, Delsi, Kaldi, and Alvintzy. Religious and popular poetry were now cultivated by Szekely, Batizi, Gelei, Tinódi, Balassa, and many others; Count Nicolas Zring, Christopher Pasko, and the talented Gyoengyoesc produced epic poems; while Balassas, Benitzky, and others devoted themselves to the lighter lyric. An encyclopædia was written in Hungarian, and published by John Tsere in 1653. This flourishing period of national literature was overcast by several circumstances, which we cannot here detail; and the Latin language came again into general use from 1700 to 1780. The first Hungarian newspaper appeared in Latin in 1721; and, during this epoch, the works of Hidi, Kazy, Husgty, Bad, Celto, and Horanyi rivalled in purity and elegance of diction those of our own Buchanan. During the last ten years of Maria Theresa's reign circumstances took another turn, and Faludi Bárólzi, Count Adam Téléki, and many others distinguished themselves by works in the Hungarian language. In 1781 the first newspaper in the Hungarian language appeared at Presburg. The ordonnances directing the Hungarian language to be taught in the schools, and adopted in judicial business, have greatly contributed to advance the national literature, and multiply the number of original works. National theatres have been formed at Buda and Pest; and poetry has been successfully cultivated by Szabó, Arawka, Matyasi, and Bergsengi; while Viray, Bathory, Marton, and Endroedi, have attained distinguished eminence as prose writers. We are sorry, however, to say, that the wise measures taken for the improvement of national literature, and the good effects of which had already become apparent, have been relaxed; and it is to be feared that the progress of knowledge in this country will be again greatly retarded.

Seminaries.] The catholics have one university and several colleges, with about 2,689 parish schools, and altogether 3,561 professors and teachers in Hungary. The united Greeks and Armenians have 382 schools, with as many teachers. The Greeks possess two gymnasiums and 1,226 schools. The Calvinists have three colleges and several gymnasiums and schools, with about 1,600 teachers. The Lutherans have one lyceum, one college, several gymnasiums and schools, and 629 teachers. The Jews have about 100 teachers. There are also agricultural schools, experimental farms, and schools of industry throughout the country.

Orders of the State.] The privileged orders are the nobles, the clergy, and the inhabitants of the free towns.

The nobles, who have assumed the title of *populus*, have maintained the same privileges which they enjoyed in the time of the Crusades. They are free from all burdens of the State, on condition of serving the king in war; not, however, without the sanction of the Diet. They also alone possess landed property. No peasant or citizen can obtain justice against a noble but through another noble, or the magistracy of a free town. The

dignity of a *magnat*, or superior noble, is either hereditary, or derived from certain offices of State. Of the former there are four princes, ninety-nine counts, and eighty-eight barons. Of the latter, the chief is the Palatine, who is chosen for life by the Diet, from four candidates named by the king. He is regent during a minority, president of the upper chamber of the Diet, and names the Vice-Palatine who commands the nobles when assembled for war. The viceroy, chief judge, *bannat*, or governor of Croatia, Dalmatia, and Slavonia, and the *tavernicus*, or president of the court of appeal, are also of this class.

The higher clergy are distinguished under the head of the nobility, and do not form a distinct class. The burghers, or inhabitants of the royal or free towns, have also great privileges, and are exempted from a great portion of the taxes; they are eligible to all offices, and they elect their own magistrates, but cannot individually possess land unless they have a patent of nobility. The condition of the peasants—who formerly were all bondsmen—has been considerably ameliorated by the Urbanial law. But the peasant of Hungary has scarcely any political rights, and there is no limit in point of fact to the services which he may be called upon to perform to the State, while he pays at least nearly ten-elevenths of the land-tax.

Government.] Hungary, since 1687, has been an hereditary monarchy limited by the representatives of the privileged orders assembled in the Diet. The succession goes in the male and female line, and the right of election in the States can only be again exercised when the present dynasty is entirely extinct. The fundamental laws of Hungary are the golden bull of king Andras II. of the year 1222, the *magna charta* of the Magyars; the privileges of the nobility as acknowledged by law in 1741; the treaty of Vienna, in 1606, and that of Lintz in 1647, by which the free exercise of religion is guaranteed to the protestants; the act of the Diet of Presburg in 1687; and the inaugural diplomas of 1790 and 1791.

The king has very extensive powers. He exercises the whole executive powers; he nominates the bishops and prelates, independent of the Pope's confirmation, which only regards their spiritual functions; he has the control of all the establishments for education; he confers all civil and military dignities, except that of the Palatine, and the two keepers of the crown; he is the president of all the tribunals of justice, and can order the *Insurrection*, as it is called, or general levy of the nation; and he alone can grant patents of nobility. But in the legislation and taxation the States have an important vote, and laws and taxes can only be imposed with the consent of the Diet. The king must swear to the constitution in presence of the people in the open air; when he receives from the hands of the primate the crown of St. Stephen.[10] He is of age at fourteen.

[10] The Hungarian regalia were formerly kept at Buda: whence, when Buda became the seat of a Turkish *Beglerbeg*, they were removed to Presburg, where they lay, till 1785, when the emperor Joseph very injudiciously removed them to Vienna, but was obliged to restore them a few days previous to his death. As Stephen was the first christian king of Hungary, he not only obtained the name of St. Stephen, by being enrolled in the registers of the Catholic saints, but a splendid crown of solid gold was sent him, in the year 1000, by pope Sylvester. It weighs 9 marks, 3 ounces, and is fashioned like that of the Greek emperors. It is ornamented with 53 sapphires, 50 rubies, a large emerald, 358 diamonds, and the images of the apostles and patriarchs. To this, was added by the pope, a patriarchal cross, afterwards inserted in the arms of Hungary. At the ceremony of the coronation, a bishop carries it before the king From this cross is derived the title of *apostolic king*. The imperial mantle, which is of fine linen, is said to be the work of the pious Gesella, spouse to St. Stephen.

The States consist of the prelates, to whom belong the Catholic and Greek archbishops, bishops, and abbots; the magnats, or higher nobility; the rest of the nobility, who are represented by two deputies from each *comitatus;* and the royal free towns. These States alone form what is called in the language of the constitution the *populus in dietum;* whilst the rest of the people are even in the laws styled the *misera plebs contribuens,* having no part in the business of the State, farther than bearing almost all its charges alone.

The Diet, or *comitia regni,* is, according to law, summoned every three years. Three months after the summons is issued, they appear in two chambers: the first consisting of the magnats and prelates, under the presidency of the Palatine; the second consisting of the deputies of the nobility. The king appears in person, or is represented by a commissioner. He announces, after the opening of the Diet, his *postulata* to the States. When the king and States have agreed on a *postulatum,* it becomes a law, or *decretum regni.* The king assembles and prorogues the Diet at pleasure. The whole Hungarian constitution is imprinted with the stamp of the middle ages; and the States generally check every improvement which the government proposes. It is not the rich part of the nobility, so much as the poorer members of the aristocracy, who deem every new act of the government an innovation on their ancient rights.

The administration of Hungary differs from that of the other Austrian States. The person of the king is represented by the Palatine, who is assisted by a council of State, of which the members are named by the king. But the whole is subordinate to the Hungarian chancery at Vienna, through which the king decides every matter constitutionally depending on his will. Each *Comitatus* is governed by a special council, of which the first officer is the *Comes,* or *Obergespacin,* of whom thirteen are hereditary,—the rest are named by the king; below the *Comes* is the *Vice-Comes ordinarius,* and the *Vice-Comes substitutus,* and two or four *judices nobilium,* besides several other officers. These administrative councils are also tribunals of justice, from which the last appeal is to the *Septemviral board.* Hungary has its own code of civil and criminal law.

Revenue.] We have no certain accounts of the revenue which Austria derives from Hungary. It is believed to be about £3,000,000 sterling. Of this £500,000 are levied as a direct tax upon the peasantry and free towns; the remainder is drawn from the crown-domains, the monopoly of salt, the mint, mines, excise, the income of vacant bishoprics, the post, and the tax paid by Jews for the right of residence.

Military Strength.] The standing military force of Hungary consists of 10 infantry regiments, amounting to 46,284 men, and as many regiments of hussars, amounting to 16,980. The dress of the cavalry is known to be peculiar, and is copied by our hussars. The term *hussar,* is Hungarian, and signifies 'the twentieth,' because twenty peasants are bound to furnish one horseman to the cavalry. The Hungarian infantry are called *haiduckes;* the light infantry go under the name of *pandours,* a name which they derive from a mean Rascian village of that name, in the district of Baja, in Lower Hungary. A still rougher tribe of warriors are the Seressans, who inhabit the frontiers of Transylvania and Moldavia. Their arms consist of a carabine and two cutlasses; their dress is similar to that of the Uhlans; and their military service is like that of the Tyrolese chasseurs.

Topography.] Hungary is divided into 6 circles.

1*st. The Circle on the left side of the Danube.*] This circle lies on the N. and E. of the Danube. The surface of this circle exceeds 22,000 square miles, and the population is nearly 2,200,000. The city of Presburg is situated within this circle on the Danube. Its population is stated by Stein, at 35,055 souls, and by Balbi, at 41,000, in 1826. It possesses a catholic college, and a Lutheran gymnasium. In the cathedral is the chapel of St. John Elemosynarius, in which the kings of Hungary were crowned in ancient times.—Buda, or Ofen, the capital of the kingdom, lies on the right bank of the Danube. It is the residence of the Palatine, and seat of the supreme government, and contains about 33,000 inhabitants. Pest, or Pesth, the finest town in the kingdom, now called the London of Hungary, is situated on the left bank of the Danube, and is united with Buda by a bridge of boats. It is quite a modern city, but already contains 3,900 houses with 59,000 inhabitants, a university with four faculties, and a library of 50,000 volumes.

2*d. The Circle beyond or on the right bank of the Danube.*} The population of this circle is about 1,700,000. It is considerably less than the former circle in extent. Oedenburg on the Ikva, the principal town, contains 12,000 inhabitants. There are large cattle-markets annually held here, and in the vicinity are several extensive coal-pits.—Raab, or Györ, on the confluence of the Raab and the Danube, contains 16,000 inhabitants.—Nagy-Szigeth, a burgh with 3000 inhabitants, is celebrated as the scene of the heroical defence and death of the count Nicolas Zrini, in 1566.[11]

3*d. The Circle on this side of the Theiss.*] This circle in the N.E. of the kingdom, contains about 15,000 square miles, with a population of 1,500,000 souls. The burgh of Tokai, or Tokay celebrated for its wines, belongs to this district.

4*th. The Circle beyond the Theiss.*] This circle forming the most eastern part of Hungary, contains a population of nearly 2,000,000. The city of Debreczin, with 45,000 inhabitants, is next to Pest the most important commercial town of Hungary.—Temeswar on the Vega and Temesch is one of the finest and most regular towns in the kingdom, and is strongly fortified.

5*th. The Province of Slavonia.*] This province extending between the Drave and the Saave, is a part of that large country which was seized along with other provinces, in the reign of Justinian, by the powerful tribe of the Slavi. A large part of ancient Slavonia now belongs to the Military frontiers of Austria. That part which still bears the ancient name of the country, extends to about 172 German, or 3,700 British square miles. Stein states the population at 330,000. Nigh to the strongly fortified town of Eszek, on the Drave, stands the famous bridge, or rather continuity of bridges constructed by Sultan Solyman, in 1566, to facilitate the entrance of the Turkish armies into Hungary. This bridge extends across the Drave and the marshes:

[11] Nicolas Zrini, general of the emperor Ferdinand I. Ban of Croatia, and Tavernicus of Hungary, had distinguished himself greatly in the war against the Turks Sultan Soliman, with 65,000 men besieged Szigeth, which was defended by Zrini, with only 3000 men, whilst almost the whole of Hungary was in the hands of the enemy. He gallantly resisted from the 5th of August to the 7th of September, and refused all offers of capitulation, after having sworn with the whole garrison to die in defence of the castle. The Turks made a general assault, and Zrini fell upon them at the head of his little army, and died like a Leonidas.

being 8,565 geometrical paces, or 5 British miles in length; and 17 paces, or 85 feet broad. This structure had towers on each side of it, at every quarter of a mile; it was railed in on both sides, and supported by large piles of wood, and on the whole, was a beautiful and stupendous piece of workmanship. Above 20,000 hands were employed in its erection. The sheep fed on the Slavonian pastures are estimated by Tauber at 2,500,000; and the annual produce of grain is estimated at an average of 12,000,000 of bushels.

6*th.* *The Province of Croatia.*] Civil Croatia comprehends the maritime districts, denominated the *Littoral*, and the three counties of Agram, Warasdin, and Kreutz, forming an area of about 3,650 British square miles, and containing a population, according to Liechtenstern, of 388,754. Agram, or Sagrab, is the capital, and contains 10,000 inhabitants; Balbi says 7000. There are several valuable mines of iron, copper, and lead, in Croatia; but most of them are entirely neglected, and none of them are wrought with any kind of spirit, though there are immense forests in their neighbourhood. Salt, vitriol, coals, and sulphur, are found in Croatia; and quarries of the most beautiful marble exist in different parts of the country. All the bridges and parapet-walls, on the road from Carlstadt to Fiume, a distance of 85 miles, and also many of the houses in Novi, and Porto Re, are built of Croatian marble. Fruits are plentiful, especially plums, from which the Croatians distil a favourite beverage called *schliwowitza*. The best fruit is produced in the delightful valley of Dragan, near Buccari; but it is most abundant in the county of Kreutz, where every peasant is obliged to engraft at least 25 trees annually; 11,000,000 bushels of grain are estimated to be annually produced.

II. THE PRINCIPALITY OF TRANSYLVANIA.

Name and Boundaries.] Transylvania comprehends part of ancient Dacia, and is called by the natives, *Erdely Orszag*, that is, 'the woody and mountainous country;' by the Germans, *Siebenbirgen*, from seven celebrated forts or castles in it, and *Transylvania*, from its lying beyond the forests of the Carpathian mountains which divide it from Hungary. It is bounded on the N. by Upper Hungary; on the N.E. by the Buckowine; on the E. by Moldavia; on the S.E. and S. by Wallachia; and on the W. by Hungary. Transylvania lies between the parallels of 45° 25′, and 48° N. latitude; and between those of 22° 30′, and 27° of E. longitude from Greenwich. Its greatest extent is from N. to S., or from the mountains of Hagymas, on the N., to where the confluent stream of the Old and Maciar Syl forces its way through the gorge of Mount Mararat in the Lesser Wallachia, which is 180 British miles. Its greatest extent from E. to W., or from the frontier of Moldavia, to the western range of mountains, dividing it from Upper Hungary, where the river Keres rushes through a narrow defile into the Hungarian plains, is 150 British miles.

Superficial Extent.] Blumenbach estimates the superficial extent of this principality at 1,118.70 German square miles; Liechtenstern assigns only 1,047.8, and Lipszky, says, 1,109.4 square miles. But deducting the Military frontiers included in these admeasurements, and which may be estimated at 253.30 German square miles, they would respectively offer us 865.67, 856.13, and 794.60 German square miles, as the prob-

able surface of Transylvania. Stein's admeasurement assigns it 842.3 German, or nearly 18,103 British square miles.

History.] The ancient inhabitants of Transylvania, in the days of Herodotus, were the *Agathyrsi*, a people of effeminate manners, *abounding in gold*, and bordering on Western Scythia.[1] What became of the Agathyrsi, whether they blended with the Getae and subsequently with the Dacians, or were extirpated by them, we know not, but we hear no more of them. About the commencement of the Christian era, Transylvania was occupied by the warlike *Dacians*, a Scythian tribe, of Gothic origin, according to Jornandes.[2] The *Jazyges*, a Sarmatic tribe, migrated from the neighbourhood of the Palus Mæotis, or Sea of Azoff, and settled in Transylvania, in the neighbourhood of the Dacians, and in the country between the Theiss and Danube, a short time prior to the Roman conquest of Dacia by the emperor Trajan. Other tribes, as the Anarti and Taurisci, were dispersed round the sources of the Theiss Maros, or Marosch, and Alauta; and the Carpi settled at the southern front of the Carpathian mountains, and gave their name to that range. Of these various tribes, the Daci were the most powerful; for besides Transvlvania, they possessed Wallachia and part of Moldavia. But their last monarch, Decebalus, being compelled to bend before the superior power of Trajan, after a hard contested war of five years, the whole nation was transplanted into the Roman provinces south of the Danube, and their own country taken possession of by Roman colonists from Italy, and other parts of the empire. The country thus planted with the conquered Dacians, was called *Nova Dacia*, and subdivided into the three districts of *Dacia Ripensis, Dacia Mediterranea*, and *Dacia Praevalitana*, comprehending the present provinces of Servia and Bulgaria. The Jazyges and Carpi, notwithstanding the destruction of the Dacians, still preserved their independence, and proved very troublesome neighbours to the Roman colonists settled on the Danube. At last the whole nation of the Carpi were transplanted by Dioclesian, into the Roman territories and Pannonia. Some remnants of the Jazyges still remain in Hungary. In the middle of the 4th century, the Goths seized Transylvania, after defeating the Sarmatians on the Marosch, where king Visimar, with the flower of the Sarmatian nobility, perished. The Goths remained in possession of Dacia, and all the countries from the Baltic to the Black Sea, till the year 375, when they were alarmed by the approach of an innumerable host of Scythians, who seemed to issue from the frozen regions of Sarmatia.[3] Re-enforced by the Alans, the Roxolani, and the rest of the nume-

[1] The circumstance of the Agathyrsi abounding in gold, (*Herod.* iv. 104.) while it determines their geographical position to be the modern Transylvania, taken in connexion with other circumstances mentioned by the Greek historian, shows that the geographical knowledge of the father of history was very great, considering the remote period in which he lived and wrote.

[2] Dio observes, that the people, called *Getae* by the Greeks, were called *Dacians* by the Romans; and Justin expressly affirms, that the Dacians were descended from the Goths. That the *Getae* and the *Goths*, were one and the same people, is now admitted by modern historians; and has been incontestibly proved by Pinkerton, and the learned Dr. Jamieson, in his Hermes Scythicus. That the *Getae* and *Goths* were the same with the ancient *Scythians*, is also put beyond all reasonable doubt: the term *Getae* being evidently a generic designation, given to various tribes of Scythians. Thus we read of the *Massa Getæ*, the *Thyssa Getæ*, and the *Tyri Getæ*; as in aftertimes, we read of the *Mæso Gothi*, the *Visi Gothi*, and *Ostro Gothi*. In the latter case, *Gothi* or *Goths*, was the primary denomination; in the former, the term *Getae*.

[3] The *Hunns*, for so these people were called, anciently inhabited an extensive country to the north of the great wall of China, now occupied by the 49 hordes of the *Mongus*, or *Mongous*, a pastoral nation. They were divided into two great bodies,

rous Sarmatian tribes whom they had subdued, the Hunns fell upon the Goths with such irresistible fury, and in such multitudes, that the warlike Ermanaric, a conqueror of many nations, unable to survive the awful calamities that now befell his nation, laid violent hands upon himself. His son, Vithimmir, a more resolute prince, for some time made a vigorous resistance, but was finally slain, with the greatest part of the Ostrogothic nation, who retreated to the plains of Podolia. The Hunns next attacked the Visigoths, who possessed Dacia, and completely defeated them, though they had constructed a strong wall extending from the Pruth to the Danube, to protect themselves from these dreadful barbarians. At last the whole nation of the Goths, unable to withstand the Hunns, abandoned Transylvania and the whole country to the north of the Danube, to their victorious invaders, who thus became masters of all the country from the Don to the Danube. Transylvania was seized by the *Gepidæ*, after the vast empire of the Hunns had terminated with the death of Attila; but some tribes of the Hunns still remained in the country, whose descendants are supposed to have been the *Siculi*, in the N.E. of Transylvania. The Gepidæ were almost wholly extirpated by the Lombards, aided by the *Avari*, another Scythian tribe, in the year 566; but some of their descendants still remain in Hungary and Transylvania. The Madschars, who conquered Hungary in the 9th century, added Transylvania to their dominions, in 997. In the middle ages, Transylvania was peopled by the following tribes, namely, the *Hungarians*, or *Madschars*, in the western quarter; the *Szeckhelyi*, erroneously named *Siculi*, and believed to be the real descendants of the once formidable Hunns, on the N.E.; a numerous colony of *Saxons* who penetrated into Transylvania in the 12th century, and settled on the frontier of Wallachia, between the rivers Alauta and Marosch; and the *Vlaki*[4] who

called the Northern and the Southern Hunns, and were long a terror to the Chinese. But at length the Chinese, aided by the Southern Hunns, in the reign of Hyau Hoti, emperor of the Han dynasty, completely defeated the Northern Hunns, about a century after the commencement of the Christian era. Of the Hunns thus subdued in Tartary, some mingled with the tribes who had been brought by the Chinese general Tew-hyen, to repeople the country; but the major part continued to advance towards the west, in two divisions in the direction of the Oxus and the Wolga, in the neighbourhood of Astracan, where, as the Chinese historians lose sight of them, ours begin to have them in view. The first division took possession of the fruitful plains betwixt the Oxus and the Jaxartes, or the Jihun and Sihun; and were called the *White Hunns*, by Procopius, and the *Heyatelah*, by the Arabian writers. The Greek historians, corrupting this last word, called these Hunns *Nepthalites*, *Eutalites*, and *Epthalites*; which led several modern writers, particularly the learned Shickhard, in his Taarich of the Persian Kings, to imagine that these people were Jews, of the tribe of Naphtali. The other division soon passing the Wolga, crossed the Steppe of Astracan, fell upon the Alans, who possessed the territories watered by the Don; and penetrating the extensive range of the Oural mountains, conquered Siberia.

[4] These Vlaki were of Roman origin; perhaps the descendants of those Romans with whom Trajan peopled Dacia, after the defeat and death of Decebalus. Constrained to abandon their settlements, by the continual succession of migratory tribes of Scythians, they retired northward to Ilak, or Black, beyond the Wolga, in the vicinity of Baskirk: they returned thence, to share the fortunes of the *Patzinacci* or *Petschinegri*, and Bulgarians, both Scythian tribes, and obtained a portion of Transylvania. The Vlaki have always been a distinct race, never mixing with the barbarous tribes, who at different times settled in Hungary and Transylvania. In the 9th century, they embraced the doctrines and rites of the Greek church, which they still profess. In the 12th century, a numerous colony of the Vlaki passed the mountains to the south of Transylvania, for the sake of pasturage for their numerous cattle, and settled in the tract lying between these mountains and the Danube, which from those colonists, was called *Blakia*, or *Vlakia*, and corruptly *Wallachia*. Soon after this, another colony of Vlaki passed the eastern range of the Crapack, and settled in Moldavia, under the conduct of *Bog-den*; from whom the country was denominated

possessed the south of Transylvania, on the borders of Wallachia. The modern inhabitants of Transylvania are thus a very mixed race, the descendants of various and distinct tribes. But the principal nations who inhabit Transylvania, are the Szeckhelyi, or Scythuli, corruptly termed *Siculi;* the Madschars, or modern Hungarians; the Vlackes; and the Saxons. Liechtenstern gives the following enumeration of the different races:—Magyars and Szeckhely, 460,000; Saxons in the south 420,000; Vlackes, or Wallachians, 800,000; Zigeunes, or Gypsies, 70,000; Slavi, or Slavonians, 7000; Armenians, 5,500; Jews, 2,500; Italians, 2,000. The Szeckhelyi, or descendants of the ancient Huns, use a dialect of the Hunno-Scythic language, an alphabet of which has been given to the public by the learned Matthew Belius; and it is believed, that several manuscripts written in the Hunno-Scythian character, and of great antiquity, are still preserved in Transylvania. The Hungarians use the same language with their brethren to the W. and N. of Transylvania; which is also spoken by the Bulgarians and Armenians. The Saxons speak the same language with the inhabitants of Lower Saxony, but so intermixed with Hungarian as makes it seem quite different from the German or High Dutch; but in the district of Burckland, on the frontiers of Wallachia, where the Saxons live unmixed with any other races, their peculiar language is spoken with the greatest purity. The language of the Vlaki—which is also spoken by the Greeks—is a dialect of the Slavonic, mixed with a great deal of bad Latin.

Modern History.] Transylvania, from its conquest by Stephen, king of Hungary, in 1004, continued subject to that kingdom, and was governed by *Waivodes.*[5] After the fatal battle of 1526, John Scepus, Waivode of Transylvania, married the widow of the unfortunate Louis, and became king of Hungary, under the protection of Solyman the magnificent, holding it and Transylvania as fiefs of the Porte. Upon the death of king John, Hungary was converted into a separate kingdom, by Sultan Solyman, and Transylvania was given to his widow and her infant son; but he dying, Transylvania was divided between two rival factions, one of which was supported by the house of Austria, and the other by the Ottoman Porte, in consequence of which, the country was a scene of intestine warfare, for many years. The papal party were supported by the power of Austria; and the Protestant party, headed by the celebrated Botskay, were aided by the Turks; when the successes of the latter obliged the court of Vienna, in 1606, to acknowledge the independence of Transylvania. Botskay was succeeded by Bethlem Gabor, a determined enemy of the Catholics and house of Austria, and a firm friend of the Porte, whose vassal he became in order to secure himself against the Catholic faction. He was succeeded by his son Stephen, between whom, and the family of Ragotski, a contest arose for the principality, in which the Ragotski family finally prevailed. Upon the death of Ragotski, a civil war again commenced; but the balance turned in favour of Michael Abaffi, who, aided by the Turks; under the

Bogdania, in the Slavonic language. Thus the Moldavians and Wallachians are the descendants of the Transylvanian Vlaki. The Wallachians are called by the modern Greeks, *Mauro-Vlakhi;* and by the Turks, *Kara-Iflak,* or vulgarly, Kara-Vlakh, which, in both languages, signifies 'the Black Wallachians.' The Moldavians are called by the Greeks, *Leuco-Vlaki,* and by the Turks, *Akh-Vlakhi,* which signifies 'the White Wallachians.'

[5] The term is Slavonic, signifying the commander of an army; but, by the Poles, it is given to governors of provinces.

famous vizir Cuprogli, completely defeated the imperialists, at the battle of Clausenburg, and drove them out of Transylvania. Abaffi continued in possession of Transylvania, as a vassal of the Porte, till his death, in 1690. At his death, the family of Ragotski contended for the principality with the victorious Austrians—who had by this time reconquered Turkish Hungary—but without success. Tekeli, who had married Abaffi's widow and inherited his claims, was equally unsuccessful, and was compelled to live as an exile for the remainder of his life in the Turkish dominions, where he died at Nicomedia. Transylvania was ceded to the Austrians, by the treaty of Carlowitz, in 1699, and has ever since continued subject to the house of Austria, though an attempt was made, in 1738, by the Ragotski family, to recover their influence under the protection of the Porte, but the matter was settled by the peace of Belgrade, in 1740.

Physical Features, &c.] In figure Transylvania resembles Bohemia, being nearly oval; and like it surrounded on all sides by ranges of lofty mountains, some of which are covered with perpetual snow. Though resembling Bohemia in these respects, it differs in this: that while the latter resembles a vast basin, or concavity,—the former is woody and mountainous throughout, the surrounding ranges sending out lateral ridges or branches from different points of their immense circumference, which terminate towards the centre of the country in hills covered with vineyards, and rich in minerals. Owing to its superior elevation, its climate is more temperate and wholesome than that of Hungary; but the water in many places is strongly impregnated with minerals, and apt to produce colics and other dangerous distempers; even the very wine produced in the country is affected in a similar way. Environed and intersected by mountains, it contains many delightful vallies, watered by innumerable streams, which, descending from the mountains on the N.E. and E., disembogue themselves into the Marosch and Alauta, the two main rivers of the country; the former of which—the *Marisos* of Strabo—running S.W. through the whole of Transylvania, enters Hungary and joins the Theiss; and the latter, after watering the eastern division of the country, runs S. through Wallachia to the Danube. There are several lakes and marshes, among the latter of which the Hellmorass, near Kovaszna, is remarkable on account of its unfathomable depth. Transylvania produces a superabundance of excellent wheat, and its rich pastures feed vast numbers of black cattle. The country contains many extensive forests, inhabited by buffaloes, bears, lynxes, elks, wild asses, wild boars, chamois, ermines, and beavers.

Industry.] Agriculture, in all its branches, is the principal occupation of the inhabitants of this country; but it is still carried on in a very primitive manner as in Hungary. Nevertheless, the fertile soil yields more than supplies the home-consumption. The vine, too, is grown on a very extensive scale, and, under good management, a considerable quantity of wine might be produced for exportation. The quantity of salt in this country is enormous; the whole of Europe might be provided with salt from hence. There are no manufactures of any importance in Transylvania.

Commerce.] The commerce of the country is in the hands of the Greeks and Armenians; and the importation probably exceeds the exportation. The transit from the Armenian provinces to Hungary and Germany is considerable.

Mines of Transylvania.] The mines of Transylvania and the Bannat

of Temeswar, are very numerous and valuable. Those of Najiag, 12 British miles to the N.E. of Deva, were discovered by a Wallachian peasant, who said that he had observed a light shining in the evening over the spot. This flame is exactly similar to that which appears in the neighbourhood of Pietra Mala, in Tuscany, and in the opinion of miners, is an indication of gold in the bowels of the earth. The mines, indicated by the above phenomenon, produce the gray gold ore, or that precious metal mixed with antimony, arsenic, lead, iron, and sometimes with manganese and zinc. They are the richest in all Transylvania, and are conducted with the greatest care. The profits of the Najiag mine, according to Dr. Clarke's information, amounted, during the space of 20 years, to 4,000,000 florins, or £25,000 sterling, annually; and the mine is still as productive as when first discovered. At Ofenbanya, 25 British miles to the north of Carlsburg, is found the white gold ore, which also occurs in the hills of Fatzebay, in the same quarter. To the west of Carlesburg, the country presents numerous gold mines, near Zalathna. In the north of Transylvania, are the gold mines of Kapnick, Rodna, Felsobanya, and others. Mr. Esmarck, who visited Hungary in 1796, also notices the gold mines of Virospatack, Kirnick, and Boitza, but some are exhausted. Oraviza, in the Bannat of Temeswar, situated on the west of a chain of mountains, consisting of micaceous schistus, granite, and metallic rock, or the *saxum metalliferum* of Baron de Born, is the chief mining town in that quarter. Towards the south of Oraviza, are found mines of copper; and gold and silver mines at Dognaska, to the south. At Ohlapan, near Zalathna, the finest gold in Transylvania is found, mixed with gravel and sand. It is supposed that Hungary and Transylvania together produce, besides gold and silver, annually, 34,000 lbs. of copper; also iron, quicksilver, and other minerals.

Religion and State of Education.] According to Hassel, there are about 380,000 Catholics and United Greeks, 917,000 Greeks, or Eastern Church, 210,000 Calvinists, 168,000 Lutherans, 45,000 Unitarians, 5,500 Armenians, and 2,500 Jews, in Transylvania; and about 70,000 Gipsies, who cannot with propriety be placed under any religious denomination. The Magyars and Saxons have the best schools; those of the Vlaki are utterly miserable. The whole of Transylvania has only two booksellers' shops, seven printing-offices, and twelve paper-mills.

Government.] The constitution of Transylvania is a limited monarchy, in many respects resembling that of Hungary; but the prince enjoys here more extensive rights, and his influence in the Diet is greater. The executive power belongs entirely to him, and no law can be enacted without his sanction. The deputies to the assembly of the States are elected by the three principal nations, among whom the Magyars hold the first place. The magnats consist of the great officers of State, the counts, and barons. The gentry are Magyars and Szeckhelyi, but the royal towns Saxons only. The principality is governed in the name of the prince and nobility, by the Diet, the officers of State, the royal government, the exchequer, the assembly of the nobles, the tribunals of justice, and the magistrates of the Szeckhelyi and Saxons. The Diets meet upon summons from the prince, at Hermanstadt. The revenues arise from the contributions, customs, metals, minerals, rock-salt, royal demesnes, escheats, and confiscations, and are levied by the treasury. They amount to from four to five million of florins.

Topography.] This country is divided into three large districts, which are again subdivided into counties.

1*st*, *The Land of the Hungarians or Magyars.*] The surface of this district, according to Liechtenstern, amounts to 425 German square miles, and the population is about 1,200,000. Klausenburg or Kolosvar, the capital of Transylvania, on the Szamos, contains 20,000 inhabitants. The gold mine of Szekerembe, in this district, produced from 1747 to 1812, 7,000,000 of florins.

2*d*, *The Land of the Szeckhelyi.*] This is a district of about 222.34 German square miles, with 200,000 inhabitants. Maros Vasarhely, or Neumarkt on the Maros, containing 9,500 inhabitants, has several fine buildings, among others the palace of Tekeli, with a library of 60,000 volumes.—Udvarhely contains 6000 inhabitants.

3*d*, *The Land of the Saxons.*] This district does not exceed 194.96 German square miles, with a population of above 400,000 souls. The chief town is Hermannstadt, with 18,000 inhabitants.—Kronstadt contains 25,000 inhabitants, and conducts an extensive commerce.—Reps, with 2,200 inhabitants, has several salt and sulphur springs.

III. THE MILITARY FRONTIERS.

Name and Boundaries.] This country has its name from its situation on the frontiers on the S.E. side of the empire, and from its military constitution. The name first occurs in the 16th century, when king Ferdinand granted lands to a number of Turkish emigrants on the boundaries of Croatia, taking them bound in return to defend these limits. The complete formation, however, of the frontiers of Karlstadt, Warasdin, and the Bannat, took place in the course of the 17th century; the Slavonian frontier was formed in 1702; and that of Transylvania between 1764 and 1766. These different boundaries run in an uninterrupted chain along the Turkish frontier from the Adriatic to Galicia, and surround the provinces of Croatia, Slavonia, Hungary, and Transylvania. They are themselves bounded by the canal of Morlach, the kingdom of Illyria, Croatia, Hungary, Transylvania, Galicia, Moldavia, Wallachia, parts of Romelia and Bosnia, and Dalmatia. The superficial extent is 881 German, or 18,942 British square miles.

Physical Features.] The face of so extensive a tract of land must, of course, differ much; but in general presents the same features as those countries to which its different districts formerly belonged. Thus the Croatian frontier is like the surface of Croatia, while the Transylvanian is mountainous. The principal mountains on the different frontiers are, —1*st*, The Crapacks on the Transylvanian frontier; 2*d*, The mountains of the Bannat, which divide Transylvania and Wallachia from the frontier of the Bannat, and in which occurs the fearful cave of Piatra Kupeseguli, also called the cave of Veterani; 3*d*, The Upper and Under Klissura, a chain which runs from the Crapacks to the Danube; 4*th*, The Julian Alps; and 5*th*, The Karnian Alps belonging to the chains running between the Saave and Drave. The higher ridges of the Military frontier lie partly on the E. and partly on the W., leaving the plains of Slavonia in the middle between them. A small part of the frontiers borders upon the Adriatic. In this district there occur several streams, such as are found in steppes, which seem to sink into the ground, and probably reach the sea by subterranean channels. Lakes are found in the district of Karlstadt only; the most remarkable are the eight lakes of Plittwitz and the lake formed

by the Gacska. In the lower districts of the Slavonian and western frontier of the Bannat there are extensive morasses.

Soil and Climate.] The soil is very various in quality. In the mountainous countries it is very poor, and fit only for pasture; but on the Slavonian frontier and the plains of Warasdin, and in the Bannat there is some excellent arable land. The calcareous soil along the sea-coast is very barren, and there is a large district of land in the Bannat, of which one-third is quicksand unsusceptible of any culture. The climate is also very different in different districts. Thus within three and a half degrees of latitude, there occurs a rough unpleasant climate at both extremities. On the S.W. the cold dry *Borra*, and the warm and damp, but violent *Zugo* reign alternately; while on the coast the fierce Tramontane, so much dreaded by sailors, ploughs up the ocean; and under the united influence of these three destructive winds all vegetation dies away. In the N.E. the air is still colder. In the immediate neighbourhood of the mountains, however, the climate is much milder; and in the valleys of the S.W. there is an Italian and Grecian sky. The plains in the Bannat and in Slavonia have the most equable and warm climate; but are not very healthy on account of the number of marshes.

Productions.] The productions of the Military frontiers are horses of Hungarian breed, not tall, but fine and swift; cattle, sheep, goats, swine, and game. The Julian Alps and Crapacks also are inhabited by wolves. Corn, Turkish corn, melons, cucumbers, fruit, wine, wood, tobacco, madder, and liquorice, are among the vegetable productions, and agriculture is the exclusive employment of the inhabitants. The commerce of the Military frontiers is merged in that of Transylvania and Hungary. The exportations consist in the productions of the country.

Population, &c.] Except on the Transylvanian frontier the Slavonians form by far the largest proportion of the inhabitants. They are reckoned to amount to above 800,000. There are also 122,000 Wlaches; 80,000 Magyars and Szeckhelyi; 9000 Germans; 1,500 Klementins; and about 1,500 Greeks, Jews, and Gipsies. German is the official language, and that of the higher classes of society. The members of the Greek church amount to 485,000; those of the Catholics to 378,000; the United Greeks exceed 44,000, and the Protestants and Unitarians amount to 40,000. There is no established religion. The inhabitants of the frontiers are distinguished for quickness of conception; but they are still much behind those of the other Hungarian States in education, though government has done a good deal of late for the establishment of schools.

Government, &c.] There is no nobility or any privileged class among the inhabitants of the frontiers,—which yet form a complete military State, having many points of resemblance to the feudal constitutions of the middle ages. The frontier government was originally created to protect the empire, of which it forms a part, against the invasion of barbarians, and in later times to form a *cordon sanitaire* against the plague. All landed property in this vast district is held by a kind of military fief on condition of military service in peace and war. Only such boys as are not fit for military service are allowed to engage in any other occupation than that of bearing arms; those who are to follow a learned profession, or to enter the church, are likewise determined by the law. A singular social institution exists in this country: several families unite in what is called a *house* or *household*, which forms a kind

of patriarchal family, of which the chief is an old man, who has finished his military service, and to whom every member of the family owes respect and obedience. The property of such a household is held in common, and every member is obliged to work for the common support; but the head of the family and his wife have a double portion. None can possess landed-property or cattle on their own account; but they may have their own money and furniture. A person leaving the family without the consent of the other members is considered as a vagabond, and treated as such. While engaged in military service each man is supported by the family to which he belongs, and in time of war he is paid by government like other soldiers of the line. The only tax is a very moderate land and trade-tax. The superior council of war at Vienna, or the *Hofkriegsrath*, is the highest authority for the military frontiers. The different governments into which they are divided, manage the military, political, and law business under the direction of this council.

Military Force.] The military frontiers form seventeen infantry regiments and one of hussars. Each of the infantry regiments contains from 2,800 to 3,600 men; and the regiment of hussars about 869. Besides these there are four companies of *Tschaikists*, for the service of the flotillas on the Danube and Theiss.

Revenue.] The military frontiers certainly cost much more to the government than they yield of revenue; but we have no exact account of the revenue or the expenditure.

Topography. There are four divisions of the military frontiers, containing in all eleven towns, twenty-four boroughs, four fortresses, and 1,995 villages.

1*st*, *The Croatian Frontier.*] This frontier forms the western part, and stretches between Illyria, the province of Croatia, the province of Slavonia, the Slavonian frontier, Bosnia, Dalmatia, and the Adriatic. The surface, according to Blumenbach is 288.10 German square miles, or 6,194 British square miles, according to Liechtenstern 278.07 German, or 5,991 British square miles, and the population, as returned in 1815, was 397,477. Zeng, a maritime town on the Adriatic, is one of the chief towns. It contains 2,590 inhabitants, and is the seat of a Catholic bishop. The harbour is not esteemed safe.—Petrinia, on the Culpa, has 3,048 inhabitants. Near the village of Topuszko is a hot mineral spring of 45° Reaumur.

2*d*, *The Slavonian Frontier.*] It borders on the N. and N.E. upon the province of Slavonia; on the E. upon Hungary; on the S. upon the Turkish empire; and on the W. on the frontier of the Bannat. The surface, according to Liechtenstern is 135.15 German square miles; and the population in 1815 was 233,265. Semlin, between the Saave and the Danube is a town of 8,313 inhabitants, and the seat of a Greek Protopope. Its commerce is rather important.—Karlowitz, on the Danube, with 5,797 inhabitants is the seat of the Greek archbishop, and metropolitan. There are here a seminary of the Morlaches for Greek priests and several schools.—Peterwardein, a town and fortress on the Danube has 3,647 inhabitants. It is one of the strongest frontier-places against the Turks, over whom prince Eugene gained a great victory here in 1716. It is fifty miles N.W. of Belgrade in 45° 15′ 30″.—The Tschaikists inhabit an angular district of this frontier, bounded by the

Danube and the Theiss, and extending to about 330 British square miles, having in 1815 a population of 22,032.

3*d*. *The Frontier of the Bannat*, or *the Hungarian Frontier*.] This frontier lies on the E. and S. part of the former Bannat, and borders on the N.W. and N. upon Hungary; on the E. upon Wallachia and Transylvania; and on the S.W. on the Slavonian frontier. The surface is according to Liechtenstern, 145.20 German, or 3,122 British square miles, and the population in 1815 was 174,631. Pancsova, a town with about 9000 inhabitants, conducts an animated commerce with Turkey. Mehadia, a village on the Krajova, with 1,414 inhabitants, has ten celebrated hot baths of a temperature from 28° to 49° Reaumur.

4*th*. *The Transylvanian Frontier*.] The Transylvanian frontier runs all around Transylvania, where that country borders upon Turkey; and is so blended with Transylvania itself, that the actual extent is not easily determined. Leichtenstern calculates it at 253.30 German, or 5,446 British square miles. The population in 1815 was 135,825, dispersed in 16 boroughs and 409 villages, but of which only 3 boroughs and 63 villages are inhabited wholly by the Frontier inhabitants; in the others they are mixed with Transylvanians. The borough of Kezdi Vasarhely, with 5000 inhabitants, possesses some commerce, and is the seat of a Calvinist school.

IV. THE KINGDOM OF DALMATIA.

Extent and Boundaries.] The kingdom of Dalmatia lies between 42° 15′, and 44° 54′ N. Lat., and is the most southern country of the monarchy; but it is not a wholly continuous tract of country, Dalmatia being separated from Ragusa, by a narrow neck of land, called *Klech*, belonging to Turkey; and Ragusa from Cattaro, by another narrow strip of Turkish territory, called *Suttorina*. This kingdom is bounded on the N. by Hungary, on the E. by Bosnia and Rumelia, or rather the *Sandschak Iskenderie*, or Pashalick of Scutari, and on the S. and W. by the Adriatic. Its superficial extent is, according to Blumenbach, 274.94 German, or 5,913 British square miles; Liechtenstern states it at 304 German, or 6,536 British square miles.

History.] The name Dalmatia is derived from *Delminium* or *Delmium*, its ancient capital. It formed the eastern part of Proper Illyricum; Liburnia, or the Hungarian Littorale, constituting the western quarter. From the *Titius*, or the modern Kerka, dividing it from Liburnia, it reached at that time to the confluence of the Drin and Drilo, or what are now called the *Drino Bianca* and the *Drino Nero*, or 'the White' and 'the Black Drin;' thus comprehending a part of Upper Albania, and the maritime districts from the Gulf of Cattaro to the Gulf of Drin. In the 4th century, Dalmatia constituted a part of Western Illyricum; *Illyricum* being then an appellation common to all the Roman provinces lying between the Alps and the Euxine or Black Sea. It was afterwards seized by the Slavi, in the reign of the emperor Heraclius. These Slavi were called *Chrobatæ*, and are the ancestors of the modern Croats and Dalmatians. Dalmatia constituted a part of the kingdom of Croatia till about the commencement of the 4th century, when, upon the death of Zlodomir, the last king of Croatia and Dalmatia, who was married to Solomera, sister to Ladislaus I. king of Hungary, his widow bequeathed it to her brother, who incorporated it, with the exception of the sea-

towns, with the Magyarian kingdom. The rising Venetian republic contended for the possession of these towns with the kings of Hungary, and finally got possession of the whole country by means of its maritime superiority. Dalmatia remained under subjection to Venice, as long as that republic preserved its own independence. But towards the latter end of the 15th century, the greatest part of it was seized by the Turks; and though, afterwards, the Venetians recovered some districts of their Dalmatian territories, the inland parts of that province are still under the sway of the Crescent. Upon the subversion of the Venetian republic by the French in 1797, Venetian Dalmatia fell to the share of Austria, and now constitutes a part of its maritime dominions. In the peace of Presburg, in 1805, Austria gave up her Dalmatian possessions to Napoleon, who first added them to the kingdom of Italy, and thereafter in 1810, joined them to the Illyrian provinces, together with Ragusa and Cattaro. In the autumn of 1813, the Austrians reconquered Dalmatia. That part, however, on the other side of the Zermanja, which had remained with Hungary, had long lost its name of Dalmatia, as well as that part which had been conquered by the Turks, who formed of it the *Sandschak Hersuk*.[1]

Physical Features.] Dalmatia spreads along the Adriatic Sea, from the Morlachian Canal, to the mountains of Montenegro, a line of coast thickly sprinkled with islands, which reach as far as the Gulf of Cattaro. The whole land along the coast is barren and uncultivated, presenting at a certain distance from the shore, a line of woods and brushwood, over which tremendous rocks rear their barren heads in frowning majesty. The different bays which occur here form admirable harbours, which are usually protected against the fury of the main sea, by the islands at their mouth. The interior of the country is intersected by high mountains, in which occur numerous valleys and even small plains which are partially cultivated; but the whole country has more of the appearance of an uninhabited wilderness, than any other province of this extensive monarchy. The soil is mostly calcareous, dry, and barren, and only in few places fit for cultivation. There are however some good tracts, such as the country of Kotar and the plain of Castelli; and with such a delightful climate, many presently barren tracts of land might by irrigation be rendered fit for cultivation.

Mountains.] The mountains of Dalmatia are all branches of the Dinarian Alps, the Wellebith and the Frontier mountains excepted, which belong to the system of the Julian Alps. The highest range is along the frontier of Bosnia; to it belong the Bosangehirt, the Manou-

[1] Dalmatia has been the theatre of great events. It was here that the Romans warred with the powerful Illyrian king, Gentius, and with the Ætolians; here the battle of Kynos Kephalæ prepared the fall of the Macedonian monarchy; here the battle of Actium decided the dominion of the world between Augustus and Anthony; it was usually at the port of Durazzo, that the Crusaders landed; and thence also the expedition for the conquest of Constantinople was forwarded by the Venetians and Baldwin of Flanders. Dalmatia was once full of large cities, towns, and villages, but very few of these now remain. The Romans five times reduced it under their yoke, and five times it shook off its hated subjection. So much has it suffered in the tide of revolutions which has swept over it, that not only are the walls and monuments of its ancient cities destroyed, but the cities themselves are absolutely depopulated. The remains of Dioclesian's palace are still to be seen at Spalatto. Salona presents a surface of two miles, covered with the ruins of walls, columns, sepulchral monuments, and aqueducts and temples. Podgraja, the ancient *Assisia* of Ptolemy, and *Assiria* of Pliny still presents vestiges of its former grandeur. But most of the ruins of these and of a hundred other towns are now covered with soil.

brod, and many other lofty mountains. The Bay of Cattaro is surrounded by the heights of Montenegro.

Seas and Rivers.] The Adriatic Sea washes the whole coast of Dalmatia, and forms the great bay of Cattaro, which contains the best harbour in the whole sea. Some of its rivers are navigable for a considerable way; and the whole coast, from Nona to Budoa—a line of more than 250 British miles, in a N.W. and S.E. direction—is deeply indented with creeks and bays, and bordered with a great number of islands. The principal rivers are the Zermagna, the Kerka, the Cettina, and the Naventa, anciently the *Tedanius*, the *Titius*, the *Tiburus*, and the *Nestus*. The Zermagna rises in the mountains of Wellebith, separating Austrian from Turkish Croatia, and after a short course, falls into the bay of Morlachia. About 20 miles to the S.E. of the Zermagna, flows the Kerka. This river rises from the southern front of the mountains of Topoli, or Erzovacz, running thence in a S.W. direction, it traverses the lake of Scardona—30 miles of direct distance from its source—and issuing thence, runs a few miles farther, and forms another lake of 6 miles in length, before emptying itself into the sea through the narrow strait of St. Antonio. There are several very fine cascades on this river.[2] The whole comparative course of the Kerka, is 60 miles, it receives the Bribirschitza, a large stream, issuing from the bottom of a steep hill, on which are seen the ruins of Bribir, an ancient residence of a powerful family of the Bans of Dalmatia.—The Cettina rises at the village of Zarebiza, and its four sources are believed to be the ramifications of a subterraneous river.[3] This river flows in a S.E. direction; its course is wild and romantic, seldom running through a plain of any length, but for leagues together dashing from rock to rock between perpendicular mountains. Near the fort of Duare, it forms a very grand cascade,

[2] The most famous are those of Rochislap and Scardona. At Rochislap—where the river is of considerable breadth,—a bridge of Turkish architecture, containing no fewer than 60 arches, has been thrown over it. This bridge, together with some mills, several cottages, and islands covered with trees, renders the scene very interesting, independently of the fall of water, which, though only 25 or 30 feet, is yet beautiful from its being divided into about twenty separate rivulets; some of which are seen tumbling rudely over the rocky precipices, and others gently pouring through chasms gradually formed and polished by the friction of the currents. The cataract at Scardona is a magnificent object, and is thus described by M. Cassas: "At the foot of the first three shelves or steps, where the river divides, the united summits of a few trees, whose trunks are concealed by a variety of objects in the fore-ground, intersect with a verdant line the whole width of the cascade; but as the water approaches, it becomes still wider: a semicircular terrace, prolonging its colossal propulsion over the abyss which receives it, thus curbs its velocity. The immense body of water fills the noble contour of this long and heavy terrace. The land seems to tremble from a distance, by the weight of its fall. The air, on being displaced by the water, seems at first to hiss or sigh, which sound gradually augments, till the noise is so terrific, that the ear is unable to sustain it; nor can the eye at last comprise the extent of the view, nor the mind sufficiently admire the awful appearance of the whole. On a nearer approach, all is changed; and nothing but confusion, chaos, or the most horrid distraction, prevails. We no longer behold that uniformity of masses,—that beauty in the groupes,—that majesty in the combination,—but we see innumerable rocks, broken, steep, and dispersed, presenting frightful points, appearing to rise from behind the water and the trees. It is no longer a river, but an ocean wild, roaring, and rushing with fury against the shapeless masses that obstruct its course."

[3] Of this there are several presumptive evidences, one of which is. that in one of the springs, which is remarkably deep, excellent trout of a large size are found; and it is a curious fact, observed by the country people, that the four sources of this river rise and fall in regular proportion to the rise and fall of the lake of Buscobiato, which is situated at 20 miles distance, and separated by very lofty mountains, which has led to the hypothesis of a subterraneous communication between this lake and the sources of the Cettina.

having a breadth of about 70 feet, and a vertical fall of 150 feet, amidst vast rocks irregularly piled upon one another, unrelieved by a single vestige of cultivation, and inhabited only by screaming vultures of an enormous size. Having escaped this horrid cataract, it pursues its way for about a quarter of a league, when it arrives at another precipice of 20 feet in height, and forms a fresh cascade. Here, however, the scene is changed; verdure and trees, and woods, appear in all their beauty,—the mountains decline into wooded hills,—and these again into plains and meadows, through which the river flows majestically, till it falls into the sea, near the dismantled fortress of Vissach, after running a comparative course of 80 British miles.—The Narenta rises on the frontiers of Bosnia, and after passing through the swampy lake of Mostar, and receiving several tributary streams in its course, falls, by three mouths, into a gulf of the same name. This river, though large, is only navigable by boats of a small size. Besides the large streams now mentioned, there are many more of considerable size, whose banks abound in beautiful and romantic scenery. There are also several lakes of large extent and well-stored with fish. The lake of Vrana, in the peninsula, which runs into the sea between the rivers Zermagna and Kerka, is 12 miles long, and all attempts to drain it have been ineffectual. The others are those of Scardona, Sebenico, Rastok, Novigrad, Narin, Trochhan, and Prelosaz. Yet notwithstanding these numerous collections of water, a great want of that precious article is felt in various parts of Dalmatia.

Climate.] The climate is very mild, and on the whole like that of the south of Italy; the soil also produces almost the same plants, but the many marshes on the coast, particularly in the neighbourhood of Zara, and at the mouth of the Narenta, render the air insalubrious, and occasion agues and fevers. Snow and frost are almost unknown in the valleys. The winter-season is only known by the quantity of rain which then falls. Even the passion-flower, and the *Verbena triphylla*, remain winter and summer in the open air.

Productions, Agriculture, and Industry.] Dalmatia abounds in marble, both white and variegated; but a great proportion of it is false or dull in the colours, and unsusceptible of a fine polish. There are masses of gypsum near Scign, and in other places. That which is found near Scign, is of finer quality than that of Ancona which is used at Venice. Marl of the most perfect whiteness is found in the district of Zara, and petrifactions of various kinds abound. There is a mine of iron-stone near Scign; and mines of this substance are also found in the territory of Knin. In ancient times Dalmatia produced a vast quantity of gold. Pliny relates, that in the reign of Nero, it furnished 50 lbs. of gold per day; and Martial gives it the epithet of '*terra aurifera*,' or a gold-producing land. This metal is not now to be met with, however; neither are there any indications of mines of mercury and silver. Wolves are found in the forests, and locusts occasionally infest the country. Dalmatia, however, is a much more rich and instructive field for the antiquarian, than for the natural historian. Not only the country, but even the very population, appears to be in a ruined state, both as to morals and civilization. The case here is quite the reverse of that of Poland, where the lords of the soil are every thing and the peasantry nothing. Here the proprietor is the slave of his tenants. What they pay in rent, is rather given as an alms than as a matter of right, and when he complains, they threaten him with their vengeance. Agriculture, therefore, is so much neglected, that the people

instead of having wholesome food in abundance, are sometimes compelled to subsist for several months of the year upon juniper-berries and wild roots. The cattle are extremely small, so that the ground is very superficially laboured. The best wool is grown in the district of Trau. Dalmatia produces maize, pulse, wheat, grapes, olives, figs, almonds, and various other kinds of fruit, but there are no potatoes. At Zara, a species of liquor called *marasquino* is made from the *marasques*, a kind of cherry, and is much celebrated in most of the cities of Europe. It is the stone of this fruit which gives the liquor its peculiar flavour. A few distilleries manufacture *rosolio*. In the district of Trau, the vine and the olive-tree are cultivated to a great extent, and in great perfection; so that from that small district alone, there are produced annually 13,000 barrels of excellent oil, and 50,000 hogsheads of remarkably good wine. It furnishes also 300,000 lbs. of dried figs, a great quantity of almonds, and 400,000 lb. of cheese, and wool in proportion. A kind of coarse cloth is manufactured from the threads of the broom, by the inhabitants of Morter, who are very industrious in gathering this material. This cloth, however, is only employed as a kind of pack-sheet for making sacks, and covering bales of merchandise. In all the islands along the coast, fishing is a common employment, especially for anchovies and mackarels, but the fisheries have much declined of late years.

Population.] The census of 1817 returned the population of Dalmatia at 304,055; Stein fixes it at 334,075; and Balbi at 350,000. The inhabitants are almost all of Slavonian descent; there are, however, a number of Italians in the towns whose ancestors settled here during the Venetian dominion. The Slavonian inhabitants are divided into two races, viz.: 1*st*, The *Morlachi*, who, according to some are of Bulgarian Slavonic, and according to others of Tartaric descent. They are a people of original manners and customs. Those who inhabit the low country are of short stature, but robust in person; and are distinguished by a lively appearance, mild manners, some hospitality, but great flexibility of character. The inhabitants of the mountains, called *Haiducks*, are a tall, strong race, of rude manners, and appearance.[4] Both tribes speak a Slavonian dialect. 2*d*, The *Montenegrians* live around the gulf of Cattaro. They are a strong wild race of men speaking a Slavonian dialect. They live in the mountains which bear their name: each family by themselves and surrounded by their property. Besides these two principal nations, and the Italian inhabitants of the towns, there are still some *Uskocks*, in this country, many of whom are piratical adventurers; there are also a few Greeks, and about 400 Jews.

The majority of the inhabitants belong to the Catholic and the United Church; of the rest about 61,164 are Greeks. Education is still in a very rude state; but there are gymnasiums at Zara, Spalatt, and Ragusa.

Government.] There is only one class among the Morlachi who are divided into citizens and peasants. Under the Venetian dominion a kind

[4] The term *Haiduck*, signifies originally 'the chief or head of a family,' and is Slavonic. In Dalmatia it is employed to designate a criminal, fugitive, assassin, and highway robber; and these Haiducks actually answer to the qualities above described under the term. But savage as the Haiducks are, they have some traits of that generosity which is common among tribes in the same stage of society. Though travellers are liable both to be plundered and murdered by them, yet they are faithful to every traveller who has had the prudence to put himself under their protection, and trust to their fidelity. In this case they are never known to deceive. Their numbers are on the increase; and were they to be headed by some intrepid and daring leader, they would become very formidable to the inhabited and more civilized parts of Dalmatia.

of nobility was formed, and certain families have taken titles, but no prerogatives are attached to them. Only in the district of Poglizza, which is inhabited by about 16,000 warlike and more civilized Morlachi, a nobility, partly of Magyarian and partly of Bosnian descent, has been established. This district enjoys particular prerogatives; the chief of it, called the *Gran Conte*, is annually elected in a general assembly; every man is a soldier; and they pay no taxes, except a small tribute. Austria has allowed this kind of republican constitution to exist at Poglizza; but Dalmatia is arbitrarily governed by Austria, there being no species of representation. The seat of the government is at Zara, and stands immediately under the court-chancery of Vienna. The revenue of Dalmatia is about 956,000 florins, and scarcely covers the expenses of the government. Dalmatia furnishes four battalions of light cavalry.

Topography.] Dalmatia is divided into five circles, viz.:

1*st*, *The Circle of Zara.*] This circle, according to Liechtenstern, contains 112.5 German square miles, and in 1817 there were 112,382 inhabitants.—Zara, the capital of the kingdom, is built on a neck of land separated from the continent by a deep ditch. Its population is about 6000. It possesses a gymnasium, two seminaries, a theatre, and a good harbour.—Zara Vichia, or Old Zara, a borough with a harbour, was formerly the residence of the kings of Dalmatia.—Sebenico, at the mouth of the Kerka, has a large harbour protected by the castle of St. Nicolo, and a magnificent cathedral. To this circle belong a number of islands: as Melada, Puntadura, Mortero, Zuri, and the two Quarnaro islands, viz. Arbe and Pago.

2*d*, *The Circle of Spalatto.*] According to Liechtenstern this circle is 96.60 German square miles in extent, with a population of 82,949. The town of Spalatto, with 7000 inhabitants, is built on a small peninsula fortified by nature and art. It possesses a spacious harbour, and is the site of many interesting remains of Roman antiquity.—To this circle belong several islands, among which are Bua, containing a remarkable asphaltic spring; Brazza, with 12,282 inhabitants, who manufacture a good deal of wine; Lesina, the ancient *Pharia*, one of the largest islands of Dalmatia, forty-four miles in length, and from five to eight in breadth; Goer, where a considerable quantity of wine is grown; and Lissa, famous for its anchovies, which are caught here in so great quantities that one boat will frequently take 150,000 in one night. The borough of Lissa occupies the site of the once celebrated town of Issa.

3*d*, *The Circle of Makarska.*] This circle has a square surface, according to Liechtenstern, of 39.30, according to others of 45.7 German miles, with a population of 38,720 in 1817. Makarska is the chief town.

4*th*, *The Circle of Ragusa.*] This circle embraces the dominions of the former republic of Ragusa. This city, with its territory, was, till seized by Bonaparte after the peace of Tilsit in 1807, a small independent aristocratical republic, under the protection of the Turks; for which it paid an annual tribute of 25,000 crowns of gold annually, including the expenses of the yearly embassy. The whole territory contains about 430 British square miles, and a population of 56,000 souls. This small State boasted of greater antiquity than Venice its hated rival. The territory denominated the State of Ragusa, is divided into continental and insular. The continental is enclosed on every side but the sea, by Austrian and Turkish Dalmatia, consisting of a narrow stripe along the

shore; and the long peninsula of Sabioncello, running out into the Adriatic, between two arms of the sea, one arm separating it from the mainland, and another separating it from the island of Melida, likewise included in the ci-devant state of Ragusa. The city is very ancient, having been founded long before the birth of Christ. It afterwards became a Roman colony; but was in the 3d century destroyed by the invading Goths. The new city was built upon the site of the old, in the place where it now stands, and was gradually enlarged. Its ancient name was *Rausis*, or *Rausa*, corruptly *Ragusa*. The Turks call it *Pabovrika;* and in the Slavonic, it is called *Dobronicka*, or *Dobronich*. It is not very large, but is well-built, and tolerably fortified. The air is wholesome; but the soil is so barren, that the inhabitants receive almost all their necessaries from their Turkish neighbours. The city of Ragusa has experienced frequent earthquakes; in that of 1667, 6000 persons perished. A great fire breaking out at the same time, the place was so injured, that it did not thoroughly recover for 20 years afterwards. The religion is the Roman Catholic; the language a dialect of the Slavonic, but the greater part of the citizens speak Italian. Ragusa formerly enjoyed considerable commerce, and the inhabitants were wealthy and industrious; the harbour is excellent. Under the shade of a free government, Ragusa had the best trade on the whole Dalmatian coast, and its manufactures were of distinguished beauty and excellent texture; but as to its present state, we can say little, Balbi states it to contain 5000 inhabitants. Stagno, on the peninsula of Sabioncello, with 900 inhabitants, is very unhealthy on account of the neighbouring marshes. The principal adjacent islands are: Kalamota, Meleda, Kurzola, with 6,447 inhabitants, and Agosta.

5th, The Circle of Cattaro.] Immediately adjoining to the south and east of Ragusa, is the division of Austrian Dalmatia, known by the name of the Cattaro. This territory is sometimes called *Lower Dalmatia*, sometimes *Albania*, and sometimes *Montenegro;* and owes its importance wholly to its forming an impregnable barrier against the Turks, and to the excellence of the harbour of Cattaro,—perhaps the most secure in Europe. This little spot, with a population not exceeding 30,000 persons, has on the E. the district of Zenta, in Upper Albania, from which it is separated by a chain of steep and rugged mountains, being an elongation of the range that runs through Dalmatia, and terminates on the sea-shore, a little to the S.E. of the Gulf of Cattaro. This dividing ridge is peopled by a fierce, hardy, and warlike people, denominated the Montenegrians, or inhabitants of the Black mountains, who have lived from time immemorial in a state of barbarous independence, amidst all the political revolutions that have successively affected the country. Neither Turks nor Venetians have ever been able to subdue them. To the Catholics, as well as Turks, they bear a most decided aversion; and to the French, when in possession of the Cattaro, they evinced a sincere and mortal hatred. In fine, these mountaineers love none but themselves and the Russians; because they are of the same faith, and because they hope, that at no long period of time, the Russians will rid them of their detested Mussulman enemies and neighbours.

The Gulf of Cattaro, (not the *mouth* of the Cattaro, as it is ridiculously denominated, as if the Cattaro were a river and not an arm of the sea), has on one hand the Ragusan territory, and on the other, the northern extremity of Albania. The entrance into the gulf is divided,

by the intervention of two rocks, into three channels, which have obtained the inappropriate appellation above-mentioned, as if a river had there emptied itself, by these three different channels into the sea. Within these, is a basin lying S.S.E. and N.N.W. 15 miles long, and from 3 to 5 broad. This basin communicates, by a narrow passage, with an inner harbour, which lies nearly in a parallel direction, and is about 11 miles long, and 2 miles broad. Ships of any size may anchor in any part of either harbour, in perfect safety, and almost close to the shore. Opposite the entrance of the outer basin or harbour, is the town of Castel Nuovo, with its ruined fortress; a place which, in the days of Sultan Solyman, and Mohammed IV., was the scene of many a desperate conflict between the Turks and Venetians. In a similar situation, fronting the entrance of the inner harbour, is the small town of Peraste, inhabited by Catholics, who have two convents beautifully situated on an island near the town. At the head of the inner basin stands Cattaro, the capital of the State, built at the foot of the steepest height of the Montenegro range, which here presents 1,200 feet of perpendicular elevation, and frowns in awful majesty upon the subjacent valley. Cattaro is so surrounded with rocks, that it cannot be seen till a close approach; and so overhung by them. as for several hours to seem buried in their shade. In summer, the reflection of the sun from these rocks makes the town uncommonly hot; but the snow continues in the hollows of the mountain throughout the whole year, thus affording a plentiful supply of water at all times. This city was well-fortified by the Venetians, with regular works towards the water, flanked by strong bastions; the works on the land-side somewhat resembling those of Gibraltar. A conical rock, rising to the height of 600 feet perpendicular from the base of the Montenegro, is detached from the mountain, about half-way its height. This rock is enclosed within the fortification; and transverse lines are carried along the side, to the very summit. These are defended by galleries, with loopholes for musketry, and cannon placed on the most commanding angles; and on the summit is a regular platform. The Cattarini, as they are called, make more wine and oil than they can consume; but of every other article of food, they produce barely enough for a three months' consumption in the year. Part of their supplies, they obtain from their fierce neighbours, the Montenegrians, but the far greater part is derived from Trieste and the Levant. In this trade, between 200 and 300 vessels are employed, many of them above 300 tons burden. Thus, depending on maritime commerce for their subsistence, a large proportion of the people are bred up from their childhood to the sea, and they are esteemed the most expert mariners in the Adriatic. The importance of this city is partly commercial and partly political, it being long regarded as an impregnable bulwark against the Turks, who had often besieged it, but in vain; and it is still viewed as the Gibraltar of Dalmatia.[5]

[5] By the peace of Presburg, the Austrians had agreed to cede it to the French, who looked upon the possession of this impregnable fortress and city as an important acquisition, on account of its excellence as a naval station, the extent of its commerce, and its being situate on the very frontiers of Turkey, whence, at any time, when an opportunity presented itself to their view, they could accomplish their ambitious views, respecting the Turkish empire. But the singular address, and diplomatic adroitness of a Russian envoy, prevented for a time the execution of this cession, on the part of Austria. The cession of this important fortress was made an essential article of the treaty of Tilsit. The consequences of this cession were exactly such as the Russian envoy had told the Montenegrians, when he persuaded them to seize it for

CHAP. IV.—THE ITALIAN STATES OF THE AUSTRIAN MONARCHY, OR THE LOMBARDO-VENETIAN KINGDOM.

THE surface of these States, according to Liechtenstern, is 830.82 German square miles; according to Blumenbach, 867.50 German square miles; and according to Stein, 862.5. We reserve our description of these States, which form an integral part of the Austrian Empire, for our article Italy.

Authorities.] Among the most useful works which have yet appeared relating to the history and geography of Austria in particular are Liechtenstern's Handbuch der neuesten Geographie des Oesterreichischen Kaisarstaats. Wien. 1817-18, 3 vols. 8vo.—Marcel de Senes, Voy. en Autriche, ou essai stat. et geogr. de cet empire. Paris, 1814, 4 vols., 8vo.—Austria as it is, by an Eyewitness. London, 1828, 8vo.—Atlas des Oesterr. Kaisarthums, in 40 Blätt. Wien. 1805.—Coxe's History of the House of Austria.

themselves: for Bonaparte's first act, after he had obtained possession of the Cattaro, was the seizure of the city and territory of Ragusa, without either plea or provocation, and the destruction of that ancient, free, and flourishing republic, which was immediately annexed to the dominions of France. In October 1813, Cattaro was taken by the British squadron in the Adriatic, under the gallant Hoste; and the garrison of 600 men, under general Gautier, obliged to surrender at discretion. This event was followed by the reduction of Ragusa and Zara, and the entire evacuation of all Dalmatia, by the French.

PRUSSIA.

Name.] This appellation is of modern date, only commencing with the 18th century, and originally confined to the tract of maritime territory lying between the borders of Courland and Pomerellia, but now extended to a monarchy, which has by various accessions of territory, risen to such a degree of political eminence as deservedly to rank among the first powers of Europe. The name *Prussia* originated, by an easy corruption, in that of the *Pruzzi*, a Slavonic tribe, or the *Borussi*, a Sarmatian clan according to Stella, who, migrating from the foot of the Riphaean mountains, were tempted to settle here, by the comparative beauty and fertility of the country. Helmold, who wrote in the 12th century, mentions the Pruzzi among the Slavonic tribes; and the name was known to Adam of Bremen, who wrote a century before Helmold.

Boundaries.] The two large districts of land constituting the Prussian dominions are bounded on the E. by Russia and Poland; on the south, by Austria, Cracovia, the kingdom of Saxony, and the territories of Hesse-Cassel, Hesse-Darmstadt, and Nassau, till we arrive at the Rhine. To the W. of this river, the Prussian acquisitions commence at the junction of the Rhine and Nahe, opposite the town of Bingen, on the southern bank of the Nahe: the bounding line ascends the Nahe, till its confluence with the Glan, from thence to the junction of this latter river with the Lauter, at Lautericken; thence it proceeds along the demarcation-line separating the late French department of the Sarre from Mont Tonnere, still ascending the Glan, and then descending the small stream of the Blies, till its confluence with the Sarre, a little below the French fortress of Sarreguiminis; thence along the old limits of the county of Sarrebruck, leaving Sarrebruck, Sarre Louis, and the course of the Sarre, together with the other towns and villages, situated on both its banks, along with their dependancies, without the limits of France, and within the Prussian territory, as far as its confluence with the Nied, at Siersberg; thence following the course of the Sarre, till it touches the borders of the ci-devant archbishopric of Treves; thence W. to the frontier of the grand duchy of Luxemburg, leaving the cantons of Wadern, Merzig, and Sarreburg, within the Prussian limits; thence it runs N., along the Moselle, till its junction with the Sour. The limits in this quarter, between the kingdom of the Netherlands on the W., and the Prussian dominions, on the E. will be given in our account of Belgium. On the N., Prussia is bounded by the Netherlands, Hanover, the two duchies of Meck-

lenburg, and the shores of the Baltic, all the way from the western extremity of Pomerania, in an eastern, and then in a northern direction, as far as the mouth of the Memel river, in 55° 46′ N. Lat.

Extent.] The extent of the Prussian territories is not easily ascertained, as they do not present that compact appearance,—that continuity of boundary line and contiguity of parts which indicate a connected dominion. The line of continuity is broken by the intervention of part of the dominions of Lippe, Hessen, Schauenburg, Hanover, Waldeck, and Nassau. The Prussian dominions are thus separated into two divisions, eastern and western; and we are obliged to take the extent of these divisions separately. The eastern division extends from the frontier of Hesse Cassel, in Long. 10° E. of Greenwich, and 51° 20′ N. Lat. to the eastern frontier of Prussian Silesia, in Long. 20° E. of Greenwich, and 50° 45′ N. Lat.; thus making a distance betwixt these extreme points of 435 British miles. If we take it from Domitz, on the Elbe, in 11° 15′ E. Long. to the frontier of Eastern Prussia, in Long. 23° E. of Greenwich, the length will be upwards of 500 British miles; but if we again take it from the western limit of the principality of Halbertstadt, to the last-mentioned point, the distance will be 550 British miles, in a S.W. and N.E. direction. The breadth of this division, from the southern frontier of Prussian Silesia, in 49° 45′ to the most northern point of Pomerellia, on the west side of the Gulf of Dantzic, in 54° 45′ N. Lat. is 360 British miles. But if we take it from the same point, to the mouth of the Memel, in N. Lat. 55° 46′, the breadth will be 460 British miles. If we again take it from the point where the Elbe leaves the present Saxon dominions, a little above Muhlberg, and enters the Prussian territory, to the most northern point of the Isle of Rugen, in the late Swedish, but now Prussian Pomerania, the breadth will be 250 British miles; and if it be again taken from the triple line of demarcation, between Prussia, Saxony, and Bohemia, to the nearest shore of the Baltic, the distance will be 210 British miles. The western division of the Prussian territories is of much less extent than the eastern, though at the same time it occupies a large space. This division may again be subdivided, for the sake of clearness, into eastern and western: the Rhine forming the limit betwixt them. The territory on the E. of the Rhine, extends in a N.W. and S.E. direction, from the fortress of Ehrenbrietstein, for the space of 135 British miles, to where the Rhine enters the Belgic dominions. But if we take it from the frontier of Wetteravia, where the Weder leaves Hesse and enters the Prussian dominions, to the N.W. angle of the county of Bentheim, the distance will be 190 British miles; and if again it be taken from the Weder, to the northern frontier of the principality of Minden, the extent will be 160 miles. On the western side of the Rhine, the newly acquired territory extends along its western bank, for the space of 170 British miles; namely, from Bingen, to where it enters the Dutch territories. The breadth gradually narrows, from E. to W., as the Rhine approaches the frontiers of Belgium. The greatest breadth is from Bingen to the frontiers of Luxemburg, which is 70 British miles; from the same point, in a S.W. direction, to Sarre Louis, the distance is much the same. From 70 and 75 miles, the breadth contracts to 50, 40, 30, and twenty miles, till it ends almost in a point, beyond Cleves. But if we take the whole extent of the western division of the Prussian territory, on both sides of the Rhine, then it will reach from E. to W., a distance of 160 miles. The ancient principality of Fulda, in the circle

of the Upper Rhine: the circle of Neustadt, in the electorate of Saxony; and some districts of Voigtland, in Reussen, are completely detached from all the other Prussian territories.[1]

[1] Disjoined, however, as the Prussian territories still are, they are not near so much so as formerly. Previous to the accession of the Great Frederic, they were little else than mere patches of territory. For instance, Eastern Prussia was completely isolated from the rest, by the intervention of the Polish dominions. The Prussian States, to the west of the Elbe, were in a similar situation, not one of them almost being connected with another. The Prussian possessions in Franconia, as Cullembach and Bayreuth, were surrounded entirely by the territories of other German princes. This continual intervention of neutral territory was a great disadvantage; and we need not wonder, that in such circumstances, the princes of the house of Brandenburg should have strenuously endeavoured both to connect and extend their dominions. Frederic clearly saw these political disadvantages, and laboured hard to remove them; which he accomplished in part by the conquest of Silesia, which lay immediately contiguous to Brandenburg; and by the partition of Poland, which, by adding the province of Regal or Western Prussia, together with the districts of Great Poland, to the north of the Netze, connected his Polish dominions with his German territories. In the revolutionary war, the Prussian states on the W. of the Rhine were seized by the French, and ceded to them by Frederic William's successor, the present sovereign. For these cessions, Prussia obtained some indemnities in Westphalia and Lower Saxony. But all these acquisitions of territory were lost, along with all the Prussian territory on the west of the Elbe, in consequence of the fatal battle of Jena, which produced the almost entire destruction of the Prussian power. By the subsequent treaty, she lost more than half her population and territory; and lay for six years almost in a state of political death, under the feet of France. By the treaty of Vienna, in 1815, the boundaries and the extent of her acquisitions were defined, along with the resumption of what she had lost by the peace of Tilsit, in 1807, (except in so far as is otherwise provided for in that treaty,) as follows: "That part of the grand duchy of Warsaw, which shall belong to his Prussian majesty, and which he shall possess in full sovereignty for himself and his successors, under the title of the grand duchy of Posen, shall be comprised in the following limits: In proceeding from the frontier of Eastern Prussia, to the village of Neuhoff, the new line will proceed along the frontier of Western Prussia, as it subsisted from the year 1772 up to the peace of Tilsit, to the village of Lobitsch, which shall belong to the duchy of Warsaw; thence there shall be drawn a line, which in leaving Konefania Grabowice and Izytno, to Prussia, passes the Vistula, near this last mentioned place, on the other side of the river which falls into the Vistula, opposite Izytno, to the ancient boundary of the district of Netze, near Gross Opoczko: so that Slusewo shall belong to the duchy, and Przbranow, Hollaendez, and Maziejewo, to Prussia. From Gross Opoczko, the line shall pass to Oldewiska, which shall remain with Prussia, to the village of Przbryslau; and thence to the city of Powida. From Powida, it shall be continued by the city of Splueze, to the confluence of the Warta and Prosna. Up this last river, the line shall ascend to within a league of Kalisch. Then leaving to Kalisch a territory of three miles in extent, along the left bank of the Prosna, the line shall return to the course of the Prosna, ascending the stream till its source, near the village of Gola, on the frontier of Silesia, opposite Petachia." By the 16th article of the same treaty, the boundaries and cessions on the side of Saxony are thus arranged: "The line shall commence at the confines of Bohemia, near Wiese, running to the environs of Seidenberg, following the course of the Wittich, till its confluence with the Neisse. Thence the line shall pass in a N.W. direction, till it touches the circle of Bautzen; the great road from the city of Gorlitz to Bautzen, belonging to Prussia, till it reaches the limits of the two circles of Bautzen and Gorlitz. Thence the line runs along, nearly in the same direction, till it strikes the Elbe, a little above Muhlberg. The line then passes along the south frontier of the bailiwick of Muhlberg, thence it proceeds N.W. along the frontier of the bailiwicks of Torgau, as far as Eclemburg and Dolitsch; between which bailiwicks, and those of Oschatz, Wasen, and Leipzig, the line passes, leaving these last to Saxony, while Eclemburg and Dolitsch go to Prussia. From Padelwitz, belonging to the bailiwick of Leipzig, and composing part of Saxony, to Eytra, likewise remaining with that state, the line cuts the county of Merseburg in such a way that Breetonfelds, Haeneelen, Gross and Klein Delzig, Mark Ranstadt, and Knaut Nauendorf, remain with Saxony; Modelwitz, Skenditz, Klein Libenau, Alt Ranstadt, Schoehlen, and Zietchen, are transferred to Prussia. Thence the line cuts the bailiwick of Pegau, between the Floss Graben and the Weisse Elster. The first from the point where it separates itself from the Weisse, or White Elster, above the city of Crossen, (composing part of the bailiwick of Haynsburg,) to the point where, below the city of Merseburg, it flows into the Saale, shall belong, in the whole of its course, with both its banks between these two cities, to the Prussian territory. Thence, where the frontier terminates in that of the county of Zeitz, it follows the latter to that of the county of Altenburg, near Luckau. The boundaries of the circle of Neustadt, the whole of which is incorporated with

To pretend to give the square miles of all these territories separately, consisting of so many small portions—especially amid the discrepancies of the German geographers themselves—would be inconceivably troublesome and tedious; we shall therefore content ourselves with giving the superficial areas of the Prussian territories, in their principal divisions, namely:—

	German Square Miles.	British Square Miles.
I. GERMAN STATES.		
The Prussian States belonging to the German confederacy, as already described, amount to	3,307.36	71,090
II. PRUSSIA PROPER.		
Eastern Prussia	702.80	15,110
Western Prussia	465.75	10,014
Grand Duchy of Posen	538.50	11,579
	5,014.41	107,793

The principality of Neufchatel, acknowledges the king of Prussia as its sovereign, but forms no part of the monarchy, as it belongs to the Swiss confederacy. The population of Prussia, in 1817, amounted, according to Hofmann, to 10,536,571, being at the rate of 2,101 persons to a German, or nearly 100 to an English square mile; but in 1826, according to Balbi, it amounted to 12,464,000 souls.

CHAP. I.—HISTORY.

Early History.] THE historical epochs of this country are not deserving of much notice. The *Pruzzi*, or ancient Prussians, were a Slavonic race, who lived in a state of complete barbarism, fed upon raw flesh, drank the blood of horses at their feasts, sacrificed their prisoners taken in war, and were the perpetual foes and disturbers of all the

Prussia, remain untouched. The districts of Voigtland, in the county of Ruessen, namely Getail, Blilandorf, Sparemberg, and Blankenburg, are all comprised in the Prussian allotment." In virtue of the above boundaries, between the kingdom of Saxony and the Prussian territories, as settled by the treaty of Vienna, all that tract of territory which formerly belonged to Saxony, and which lies to the E. N. and W. of the above line, is transferred to the king of Prussia. By the same treaty, the king of Prussia ceded the principality of East Friesland, and part of Lower Munster, to Hanover, in exchange for the duchy of Saxe Lauenburg, and that part of the duchy of Lunenburg, which is situated on the right bank of the Elbe, with the bailiwicks of Kloetze, Elbingerode, and Reckeberg, the villages of Rudgershayn, and Gauseteich, all of which lay contiguous to the Prussian territories, whilst East Friesland was wholly detached from them. The duchy of Saxe Lauenburg was afterwards, by a subsequent treaty with Denmark, transferred to that power, by Prussia, in exchange for Swedish Pomerania. By the same treaty, Prussia cedes Hildesheim, the city and territory of Goslar, to the kingdom of Hanover. The line of demarcation between France and Prussia, is not exactly the same as laid down in the treaty of Vienna; as by the subsequent peace of Paris, 20th November, 1815, the Prussian boundaries were extended to the west of the Sarre, by which Prussia obtained the county of Nassau-Sarrebruck, the town and district of Sarre-Louis, the cantons of Arnwal, part of the canton of Lebach, with the cantons of Merzig, Wadern, and Sarreburg, all in the ci-devant department of the Sarre, together with those of Ottweiler, and Bliescastel. In addition to these cessions, she has resumed all her possessions in Germany previous to the peace of Tilsit, with the exception of East Friesland, part of Lower Munster, and Hildesheim, ceded to Hanover; and the principalities of Cullembach and Bayreuth, ceded to Bavaria, in 1806, which last contain a population of half a million of souls. Besides the above cessions, Prussia has lost the greatest part of the grand duchy of Warsaw, which has been transferred to the Russian autocrat.

neighbouring nations. For a long period of time they had no form of government; property was in common, and power was the only standard of right. They were so extremely savage, that they knew not the method of constructing huts, but took up their rude abode in holes dug in the earth, or in the cavities of rocks and trees; and no other rule as to the number of wives was observed, than the possibility of maintaining them. Parents possessed unlimited authority over their children; and as there were no magistrates, every master had despotic power in his own family. But the strongest test of their barbarism, was the practice of putting to death all the sick of whose recovery they despaired,—a custom still prevalent on the coast of Africa and some of the islands of the Indian archipelago. Their only offensive weapons were sharp stakes hardened in the fire. All booty taken in war was divided into three parts: the first was appropriated to their deities; the second was given to the priests; and the third to the captors. Previous to the arrival of the *Sudini*, or *Sudavians*, a Sarmatian tribe, and more civilized than themselves, they were totally destitute of any form of religious worship. By this new tribe, they were taught to worship snakes, which—like the people of Whidaw, on the slave coast of Africa,—they kept and fed in their caves as tutelary beings. From them they also learned to venerate the oak, as the monarch of the wood, and the noblest and most durable of trees. Under the shade of this tree their public worship and private orgies were performed. Their three chief divinities were Pecunos, Pecoltos, and Potrimpos. Next in rank to these personages, were Curcha, Warschaito, and Ischwambatro; and the inferior order were chosen from the reptile and inanimate creation: as snakes, trees, woods, stones, and mountains. They moreover adored the celestial luminaries, and eclipses, thunder, hail, storms, and other natural phenomena, many of which they viewed as indications of the divine wrath, to appease which, they sacrificed their prisoners, after the manner of the Lithuanians. By the incorporation of the Sudini with the Pruzzi, some appearance of a regular government was formed; cities, towns, and villages, were built; civil dissensions were avoided; and, under the direction of certain chiefs, they successfully united to defend themselves against external attacks. In the latter end of the 12th century, Bolislaus, king of Poland, attempted to subdue the Prussians, under the pretence of converting them to the Christian faith. The pagan Prussians unable to contend with such a conqueror in the field, feigned conversion, promised obedience, and consented to be baptized. But the moment the invading army was withdrawn, they renounced their compulsory baptism, butchered the Catholic priests, and persecuted to the death those few of their own number who had sincerely embraced Christianity. Bolislaus incensed at this conduct, recommenced the war; but as the Prussians were better prepared to resist than before, he was totally defeated in the attempt. The Polish princes unable to establish Christianity, and drive the obstinate Prussian pagans from their idolatry, called in the Teutonic Knights to their assistance. This society of warriors, equally enterprising and ambitious, after a war of fifty years, and numberless sanguinary conflicts, accomplished the arduous task of Christianizing the country, by the utter extermination of almost all the ancient inhabitants. The knights directed their arms, after having almost exterminated the pagan Prussians, against the infidel Lithuanians, with various success. But their wars with Poland were less fortunate; and about 1446, the four chief cities of Prussia, Elbingen,

Thorn, Koenigsberg, and Dantzig, renounced their subjection to the Order, and claimed the protection of Poland. In 1466, they were forced to abandon Eastern Prussia to Casimir king of Poland, and to do homage for Western Prussia. Albert of Brandenburg, grand master of the Order, obtained from his maternal uncle, Sigismund of Poland, the hereditary investiture of all the possessions of the Teutonic knights in Prussia, and embraced the Lutheran religion. The last grand master of this order, Gothofred Kettler, abdicated his dignity, and obtained the duchies of Courland and Semigallia, as an hereditary sovereignty, from Sigismund II. of Poland; and from that time we hear no more of the Teutonic order, either in Prussia or Poland. In 1569, Joachim II. elector of Brandenburg, obtained from the Polish monarch a grant of succession to ducal or Eastern Prussia. But this addition of power and territory did not take place till 1618, when John Sigismund, elector of Brandenburg, acquired this duchy; and in 1621, his successor received the solemn investiture from the Polish monarch. John renounced the Lutheran creed for that of the Reformed church, which has since that time been professed by the royal family of Prussia. His son and successor, John George William, who succeeded him in 1619, wished to remain neutral in the Thirty years' war; but could not prevent his lands from being plundered and laid waste by the belligerents. He was at last forced to unite with king Gustavus Adolphus of Sweden, and subscribed to the peace of Prague, without, however, greatly benefiting his country, which, upon his death, near the close of the war, came into the hands of his son, Frederic William, who reigned from 1640 to 1688, with much firmness and wisdom.

Frederic William.] By the Westphalian peace Frederic obtained possession of Pomerania, and also acquired the secularized bishoprics of Magdeburg and Halberstadt, with several other districts. Involved in a war between Sweden and Poland, he obtained, after several reverses of fortune, the entire sovereignty of the dukedom of Prussia, which had hitherto been held in fief only by the house of Brandenburg. Frederic now set himself to improve the administration of his country; he restricted the privileges of the nobility and the clergy; encouraged agriculture, industry, and commerce; and greatly increased the wealth and population of his dominions by his wise measures, particularly by affording every kind of facility and encouragement to the Huguenots, driven out of France at that time by the revocation of the edict of Nantes. He took part in the war between the Netherlands and France, as an ally of the former; but the Austrians remained inactive in this war from feelings of jealousy towards the great elector, and he was thus forced by Turenne to retire into the interior of Germany. France, at the same time, excited Charles XI. of Sweden to invade Brandenburg by promising him subsidies; but Frederic completely routed the Swedes, at Fehrbellin, on the 18th June, 1675; and took possession of Farther Pomerania. He also defeated a second invading Swedish army, in 1678; but after the peace of Nimeguen between Austria and Louis XIV., concluded on the 5th of February, 1679, left the Westphalian provinces exposed to French invasion, he also concluded a peace with France at St. Germains, on the 29th of June, 1679, by which he obtained a small district in Pomerania, together with a sum of 800,000 crowns as an indemnification for the expenses of the war. During the campaign he made with the Austrians at the Rhine, the young duke Frederic of Liegnitz died, whereupon

Austria, as liege lord of Silesia, assumed possession of the three principalities of Liegnitz, Breig, and Wohlau; although, according to a family treaty, they should have gone to Brandenburg. After the war of 1686, the elector could not obtain any farther indemnification from Austria, than the cession of the circle of Schwiebus, and even this his son and heir Frederic promised in a secret treaty to restore to Austria.

Frederic III.] Frederic III., who succeeded his father in 1688, and reigned till 1713, was, in every feature of his character, wholly unlike his illustrious father; the father had shaken off his dependance on Austria, the son again submitted to it; the father was economical, the son a spendthrift, who vainly wished to imitate the splendour of the French court. He assisted the emperor with a corps of men against the Turks, in 1690; and by another alliance with Austria, Spain, England, and Holland, obliged himself to furnish 20,000 men for the war against France. The elector of Saxony at this moment wore the crown of Poland, and the elector of Hanover had the expectation of mounting the throne of England; the royal title became also the highest aim of this vain prince; and after long and expensive negotiations he obtained the wished for honour in a treaty concluded at Vienna on the 16th of November, 1700. Frederic promised in this treaty to furnish 10,000 men at his own expense to Austria for the war of the Spanish succession, which was then about to take place; to renounce the subsidies due to him by Austria; to give, in the election of an emperor, his vote to Austria; to vote with the emperor in all affairs of the German empire; and to advance no new pretensions in the electoral college on account of his new dignity. Immediately after the signing of this treaty, Frederic issued a manifesto declaring that he had assumed the royal dignity; and on the 18th of January, 1701, placed the royal crown on his own head at Koenigsberg, declaring the duchy of Prussia raised to the rank of a kingdom, although, on account of Poland, he assumed only the title of king *in* Prussia, being in possession of Eastern Prussia only.[2] Under Frederic's reign the increase of the Prussian territory was not important. He obtained Lingen and some other districts in Holland and Westphalia from prince William III. of Orange; he also acquired from Poland the province of Elbing; and, after the extinction of the house of Longueville, in 1707, he was chosen sovereign by the States of the principalities of Neufchatel and Valengin, and in this quality acknowledged by France in the peace of Utrecht. Frederic encouraged the arts and sciences; he founded the university of Halle, in 1694, which, by the exertions of Thomasius and several distinguished professors, maintained an excellent reputation from its very commencement; he also founded the academy of Sciences at Berlin, and another for sculpture and pictures.

Frederic William I.] He was succeeded by his son Frederic William I. who reigned from 1713 to 1740. The character of this prince was considerably opposite to that of his father; his rudeness often reminds us of the middle ages; he was a good economist, and, upon the whole, a shrewd man; but a mere soldier, without any pretension to refinement. It was he who laid the foundation of the military power of Prussia; and he left to his illustrious son a well-exercised and disciplined army of 70,000 men,

[2] It was not until Western Prussia had been joined to his dominions by the first partition of Poland in 1772, that the full right to the title of king of Prussia was established.

a treasury containing above £7,000,000, and a population whose numbers, wealth, and industry, had been greatly increased during his reign by 18,000 emigrants from Salzburg, and the Dissidents who had fled from Poland. He also encouraged agriculture greatly, established manufactures, and improved the schools. By the peace with France at Utrecht, in 1713, he obtained, by renouncing the principality of Orange, the greatest part of the principality of Guelders, belonging to the Spanish Netherlands, to which he had claims as duke of Cleve; after having taken part in the northern war against Charles XII. he acquired after the death of the latter, in the peace of Stockholm, on 21st of January, 1721, Stettin, Pomerania to the Peene, and the Islands of Usedom and Wollin; paying on the other hand 2,000,000 of crowns to Sweden. The part he took in the Polish war of succession, was confined to a military movement in favour of Stanislaus Leszinsky. The private character of this prince was by no means amiable; his daughter, the margravine of Anspach-Bayreuth, has left a most disgusting picture of him in her memoirs.

Frederic the Great.] He was succeeded by Frederic II., who, in a reign of 46 years, from 1740 to 1786, by a combination of high talents, and restless activity of mind, seconded by good fortune, a well-disciplined army, a wise government, and good laws, raised the Prussian State to a degree of power and influence, which she had never before possessed, and by which the whole political system of Europe was essentially changed. By his energetic measures, he raised his kingdom from the rank of a dependance of the house of Habsburg, to that of a vigorous opponent and rival of its ambitious plans. When Frederic II. mounted the Prussian throne, the population of his kingdom did not exceed 2,200,000 individuals; at his death, more than 6,000,000 obeyed the Prussian sceptre. Bold and fortunate as a conqueror, he deserves yet greater praise and admiration as a ruler. Frederic had by his gallant army obtained the political power he aimed at, and although conscious of the advantages of peace to his people, he could only support the rising fortunes of his kingdom by keeping up that warlike spirit which his own talents and success had first inspired. But Frederic was not a mere soldier; he looked upon himself as merely the first servant of the State; and full of this great idea, he presided over all its affairs with the care and solicitude of a father. His reign has confirmed the truth, that even in an absolute monarchy, if a high-minded man rules over it, the most extensive liberty of the press is not incompatible with the purposes of government, and the progress of civilization may be successfully carried on. The expenses of his court did not exceed £200,000 annually, and at his death he bequeathed a treasury containing more than £13,000,000 to his successor, without having once checked, by any of his financial measures, that free circulation of money which maintains the vital strength of a country. Under the pressure of a stern military education, he found means, while a young man, to cultivate his natural taste for the sciences and belles lettres, in which he was encouraged by his mother, Sophia Dorothea, the sister of George II. of England. In early life, unable to submit any longer to the tyranny with which he was treated by his father, he resolved to fly to England; but his plan was discovered, and himself arrested and imprisoned at Custrin, where, by an act of atrocious cruelty on the part of his father, he was forced to witness the execution of his friend and confidant Katt, who had been condemned to death by an unjust and arbitrary sentence of the king, who would have also con-

demned his own son, had it not been for the strenuous intercession of the Austrian ambassador, and of the deacon Reinbeck, who exercised the greatest power of persuasion over Frederic William's mind. He compelled his son to marry against his inclination, and gave him the town of Rheinsberg, where he lived in absolute retirement, entirely devoted to the sciences and arts, till he mounted the throne. During his exile, however, the young prince had collected several of the most distinguished scholars and artists around him, and maintained a close correspondence with several illustrious foreigners, particularly with Voltaire, whose great admirer he was. He mounted the throne on the 31st of May, 1740. The death of the emperor Charles VI. was a favourable moment for Frederic opening his political career. Without absolutely maintaining the claims of the house of Brandenburg to the Silesian principalities of Jägerndorf, Liegnitz, Briez, and Wohlau, he now demanded from the queen, Maria Theresa, the duchies of Glogau and Sagan, and promised on the other hand to support her against all her enemies, to give his vote to her husband in the election of an emperor, and to pay her 2,000,000 of crowns. These proposals being rejected, he opened the first Silesian war in 1740, and defeated the Austrians at Mollwitz, on the 10th of April, 1741. This victory decided the fate of Silesia; and France and Bavaria having united with Prussia, the war of the Austrian succession began. Austria's only ally, George II. of England, hereupon strongly advised peace with Prussia, considering Frederic as the most active and dangerous enemy a neighbouring nation could have; and this peace was concluded at Berlin in 1742, after Frederic's victory at Cholusitz. Frederic now obtained by treaty the whole of Upper and Lower Silesia, and the county of Glatz, with the exception of Troppau, Jägerndorf, and Teschen; and on his part, renounced all other claims, took upon him the payment of a debt of 1,700,000 crowns, with which Silesia was burdened, and promised to maintain inviolable the rights of the Catholics in that province. Saxony joined this peace, of which England and Russia were the guarantees.[3] Frederic made use of this peace in organizing his newly-acquired territories, and increasing his military strength. He also acquired East Friesland by the death of the last count of Friesland in 1743, Brandenburg having an ancient claim upon that province. When, in the continuation of the war of the Austrian succession, the emperor Charles VII. had been driven from his

[3] Frederic's claim to Silesia cannot be defended upon the principles of equity, justice, and good faith. The compact between the elector Joachim and Henry, duke of Liegnitz, in 1537, and upon which Frederic's claim was founded, will not avail. For although by the death of the last duke of Liegnitz, in 1678, the succession of all his estates devolved, according to agreement, on the house of Brandenburg, yet the claim was not allowed by the emperor; an indemnity, however, the circle of Schwibus, a corner of Silesia bordering upon the electorat, was formally ceded to the great elector, in consequence of which he formally renounced all pretensions to the principalities of Liegnitz, Brieg, and Wolaw. Some years afterwards, the circle of Schwibus was restored by Frederic I. to the emperor, in terms of a secret engagement; and the counties of Limburg and East Friesland were received as a compensation for Schwibus. The house of Brandenburg had thus solemnly given up all claim to Silesia. Farther, by the Pragmatic sanction, Frederic William I. had engaged to secure the hereditary dominions of the Austrian family to the emperor Charles VI.'s only daughter and heir; and yet, in defiance of the faith of a treaty, by which all claims to Silesia were solemnly departed from by his great-grandfather and by Frederic I. —and in defiance of that very treaty by which his father voluntarily became bound to maintain Maria Theresa in her hereditary dominions, of which Silesia constituted a part, Frederic the Great set up the antiquated claim, and joined a pack of royal robbers to despoil a helpless but noble-minded queen!

Bavarian lands, and the Austrian arms were almost everywhere victorious. Frederic began to entertain some apprehensions lest Silesia should be wrested from him, and entered into a secret alliance with France, the emperor, the elector Palatine, and Hessen-Cassel. On the 10th of August, 1744, he suddenly entered Bohemia, and conquered Prague; but he was obliged to quit the country before the end of the year. After the death of Charles VII. the young elector of Bavaria, Maximilian Joseph, entered into a treaty of peace with Maria Theresa, while Hessen-Cassel declared itself neuter. On the other hand, a treaty had been concluded between Austria, England, the Netherlands, and Saxony, at Warsaw, on the 8th of January, 1745; and Saxony also concluded a special treaty with Austria. But Frederic conquered the Austrians and Saxons, entered Bohemia, and after gaining another victory over the Saxons at Kesselsdorf, on the 15th of December, 1745, the peace of Dresden was concluded on the 25th of the same month, by which Frederic's right to Silesia was recognized by the one party, while he recognized Francis I. as emperor, and Saxony agreed to pay 1,000,000 of crowns to Prussia. Frederic made use of the eleven years of peace which followed this war, in improving the internal condition of his lands, and devoted his leisure time to the arts and sciences. But secret intelligence, which he received through the treachery of the secretary Menzel, led him to dread a new attack upon Silesia, and he instantly hastened thither to anticipate the designs of his enemies, and entered with 60,000 men into Saxony, where he surrounded 17,000 Saxons in the camp of Pirna, and starved them into a surrender. This invasion of Saxony was regarded by the other powers as an infraction of the general peace; and on the 17th of January, 1757, the German empire declared war against Frederic. Sweden also joined his enemies; but an army, consisting of Hanoverian, Brunswick, and Hessian troops, collected to his aid upon the Rhine. The principal weight of this war fell upon Saxony, Bohemia, and Silesia. Frederic was victorious in the dreadful battle of Prague, fought on the 6th of May, 1757, after which he besieged the capital of Bohemia, but was obliged to retreat, after having lost the battle of Collin, on the 18th of June, 1757. Whilst the Prussian monarch retired into Saxony, the Russians invaded Prussia, and the Swedes Pomerania, and a part of the Mark; but the war at the Rhine was carried on with alternating fortune, the French under Marshal d'Estrées having at first had a victory over Frederic's allies under the duke of Cumberland, upon which a treaty of neutrality was signed, but which was neither ratified at Paris nor at London; and Frederic having gained a complete victory over the French under Saubize, and the troops of the empire under prince Joseph of Hildburghausen, at Rossbach, on the 5th of November, 1757. Frederic now hastened into Silesia, where he defeated the Austrians at Leuthen, on the 5th of December, 1757, whilst the Russian general, Fermor, occupied the kingdom of Prussia. On the 15th of August, 1758, Frederic defeated the Russians at Zorndorf, near Cüstrin; but the Austrian general Daun surprised the Prussian camp at Hochkirchen, on the 14th of October, 1758, for which he was rewarded with a consecrated hat and sword from Pope Clement XIII.; and Frederic also lost the battle of Kunersdorf against the Russians.[4] While these reverses

[4] This battle, in which Frederic, with an army of only 50,000 men, dared to attack the Russians under marshal Soltikof, 80,000 strong, and protected by intrenchments, was the most fatal defeat that Frederic suffered during the war. Not content with

of fortune happened to his own arms, his allies were victorious on the Weser and the Rhine; and fortunately for the Prussian cause the misunderstanding which existed between the Russian and Austrian generals, hindered their operations in Silesia. Frederic defeated the Austrians at Liegnitz, on the 15th of August, 1760; and the Russians and Austrians, who had in the meanwhile taken possession of Berlin, imposed a contribution on the citizens, but retired on Frederic's return, who again entered Saxony, and gained the decisive battle of Torgau, on the 3d of September, 1760. However effectually Frederic had hitherto resisted all the attacks of his enemies, his resources were now nearly exhausted; and in this situation, the death of his ally, George II., on the 23d of October, 1760, was a serious loss to him, as the subsidies which he had received from Britain were stopped under the ministry of Bute. On the other hand, the French minister, Choiseul, in virtue of the family treaty of the Bourbons, engaged Spain in a maritime war with England, which then found an ally in Portugal. But nothing so effectually revived Frederic's hopes in this situation as the death of the empress Elizabeth of Russia, on the 5th of January, 1762, and the accession of Peter III., his own friend and admirer to the throne of that kingdom. Peter gave the first public proof of his attachment to the Prussian king, by concluding a treaty of peace with him on the 6th of May 1762. The peace with Sweden, of the 22d May 1762, followed, and soon afterwards an alliance between Peter and Frederic. When the former was murdered, the empress Catharine II., who succeeded him on the 9th of July, 1762, dissolved this alliance, and declared the neutrality of Russia; but after two more victories over the Austrians, the peace of Versailles, on the 10th of February, 1763, finished the maritime war, and that of Hubertsburg, on the 15th of February, 1763, terminated a war of eight campaigns, in the course of which Frederic's narrow and unconnected dominions—aptly compared by Voltaire to a pair of garters—were repeatedly overrun, Silesia twice laid waste, and himself more than once brought to the brink of destruction,—a war in which upwards of thirty pitched battles were fought, and nineteen of them by Frederic in person, who lost, before the year 1761, forty-six of his best generals, and was reduced at one time to such distress, as actually to contemplate an act of suicide, from which he was diverted by the marquis d'Argens, one of his intimate literary associates. The peace was concluded on the *statu quo* before the war; but Frederic had acquired a military reputation in this

having driven the Russians from their intrenchments, after a hard and bloody contest of six hours, he wished to render his victory complete by driving them from their last stand, contrary to the advice of his generals, who remonstrated that their men were fatigued with slaughter, and oppressed with excessive thirst and heat. But the celebrated marshal Laudohn having arrived at the Russian camp with 12,000 fresh cavalry, charged the wearied Prussians with such vigour, that they were thrown into disorder; and though Frederic rallied them repeatedly, and brought them again into action, he was at length utterly routed, with the loss of 19,000 men slain on the field, and almost all the rest of his army wounded or taken prisoners. At the last attack, Frederic, as if in utter despair, waited at the Russian batteries for a shot to put an end to his life, but was led off by some of his own soldiers to his camp. When we reflect on the vicissitudes of this engagement, it would seem as if Victory had torn the laurel wreath from the conqueror's brow, in just resentment of his wanton effusion of human blood. Happily for him, the Russians did not attack that night, when he retreated to his former position, or the battle of Kunersdorf might have been as decisive as that of Waterloo in our own day. The Austrian commander, marshal Daun, reproached Soltikof for his inactivity after the victory. To which Soltikof replied: "I have done enough for this year, Sir; I have gained the two battles of Zullichau and Kunersdorff, which have cost Russia 27,000 of her bravest warriors; I expect, as an incitement to the renewal of my operations, that you will gain two victories in your turn. It is not reasonable that my sovereign's troops should act alone."

seven years' war, which secured to him a decisive influence on European affairs. His next care was to recruit the internal strength of his territories which had been exhausted by so long a war; he opened his magazines, rebuilt towns and villages—to some of which he granted freedom from taxation for a certain definite period—founded a bank at Berlin, and re-organized the excise on the French footing, a measure which excited great discontent.

Partitions of Poland.] Had Frederic confined himself to this line of conduct, his political character, ambitious as it was, might have passed to posterity with comparatively few stains. But the partition of Poland will ever remain a foul blot on his glory. The distracted state of that country presented her enemies with too favourable an occasion for carrying their ambitious designs into effect. One great cause of Polish misery was owing to religious animosity exasperated by the bigotry of the Catholics. A great proportion of the population were Greeks and Protestants. For some time after the Reformation, religious liberty had been enjoyed in Poland by all who professed the Christian name. Sigismund Augustus, one of the wisest of the Polish sovereigns, sensible of the advantages resulting to the State from the fullest recognition of the principle of religious liberty, procured a solemn edict of toleration, to be issued in 1563. This law was afterwards confirmed; and the national tranquillity might have been preserved had the succeeding Polish monarchs been endowed with the wisdom of Sigismund in maintaining that liberty to the defence of which they had sworn at the *Pacta Conventa.* In these times, the Roman Catholics constituted only a third part of the nation; and this circumstance operated as a kind of guarantee to the general recognition of religious liberty. But this body gradually gained ground in Poland under a number of concurring causes, especially through the influence of Jesuit missionaries, and at last became predominant under the reign of the bigoted Sigismund, when immediate opportunity was taken of this superiority, to oppress the *dissidents,* as they were termed in Poland. A persecution was first commenced in 1638, against the Socinians, whose imprudent conduct, combined with their heretical tenets, had rendered them odious to the Catholics. By a decree of the diet, the Socinian university of Racow was ordered to be demolished, the professors banished, their printing-houses destroyed, and their churches shut. All this was executed with the most rigid severity, and by a public and solemn act passed at the Diet of Warsaw, in 1658, the whole sect were banished for ever from Poland; and the punishment of death was denounced against all who should either profess their opinions or harbour their persons. In 1661, this terrible edict was renewed, and the persecution of the Socinian dissenters was gradually extended to all the other dissidents. At the period of the bigoted Sigismund the Third's death, the Roman Catholics constituted three-fourths of the senate, and a hundred churches of the dissidents had been forcibly demolished. By the treaty of Oliva, indeed, in 1660, the ruling party was constrained to acknowledge a partial restoration of the dissidents' privileges; but the Roman Catholics still possessed the means of defeating the objects of this treaty, though guaranteed by four of the most powerful sovereigns of Europe. The first Saxon king of Poland, who abandoned Lutheranism was prevailed upon to enact laws in 1717 and 1723 partially depriving dissidents of their privileges, in order to conciliate his turbulent Catholic nobles and clergy. So confident were the Roman

Catholics grown from their past success, especially in the calamitous affair of Thorn, in 1724, and from the election of Augustus II. to the throne, that, in 1736, they boldly proposed a constitution by which the dissidents were declared incapable of holding any public office; and to prevent any attempt to reclaim their rights, it was decreed, that whoever of the dissidents should implore the intercession of foreign powers, should be held a traitor and punished accordingly, even though he should have addressed himself to the guarantees of the treaty of Oliva. Affairs were in this state, when Stanislaus Poniatofski obtained the crown, in 1768. As he owed his promotion to Russian influence, the Greek and Protestant dissidents indulged a hope of milder treatment. Encouraged by the bishop of Mohilof, the only prelate of the Greek faith, they determined to attempt the recovery of their privileges; and in 1765, application was made to the guarantees of the treaty: namely, Great Britain, Sweden, Holland, and Prussia. These powers, by their ambassadors, interceded warmly in behalf of the Greek and Protestant dissidents, at the general diet, in 1766; but the torch of religious animosity was now fired, and the bigotry of the Catholics hastened the ruin of Poland. The bishop of Cracow, in opposition to the intercession of the above powers, asserted in open assembly, that the *Pacta Conventa*, as it now stood, ordained that the Catholic religion should be maintained; that according to the laws of the kingdom, they could not even grant the dissidents simple toleration; and that the latter had violated the constitution of the State by applying to foreign powers. A draught of a law was then read by this reverend personage, importing that no concessions should be granted to the dissidents. It was in vain that Russian troops entered Warsaw to enforce the requisition of Catharine in favour of the dissidents: in vain was her requisition supported by a spirited memorial from the British minister; and equally fruitless was the attempt of Stanislaus himself to intercede in favour of his dissenting subjects. Religious zeal rendered the Catholic dietines insensible to fear; nothing could overawe them, or shake the stern purpose of their souls, and the dissidents were baffled in their attempt. The Lithuanian dissidents finding that the interposition of the protestant powers and Russia in their favour was fruitless, formed a confederacy, and appointed a general and council to conduct their operations; and soon after, the Polish nobles of their party, 300 in number, confederated and chose another general and council for the same purpose, and were joined by the cities of Elbingen, Thorn, and Dantzic. The consciousness of strength, and a reliance on foreign aid, did not betray them into insolence or acts of outrage; but their protectress, the northern Semiramis, acted in a different manner. While they temperately recapitulated their grievances, without aspersing the Roman Catholics, she, on the contrary, declared her determination to maintain the dissidents in their cause, and ordered her troops to treat all those as her enemies who should ill-treat them. But neither the revolt of the dissidents, nor the menaces of the Russian empress, nor the increase of her troops, nor the representations of the guarantees of Oliva, could alter the determination of the Roman Catholics in this fated kingdom. For although a diet was again assembled in order to terminate the existing disorders and restore the public peace; yet, when a proposition was made by those who were desirous of accommodating the differences in question, that commissioners should be appointed from the three orders of the State, and empowered to conclude with the Russian

ambassadors upon all matters relative to the dissidents, it was strenuously opposed by the Roman Catholic partisans. Warm altercations taking place, a detachment of the Russian troops which had surrounded Warsaw during the diet, as the most summary mode of ending the dispute, seized the bishops of Cracow and Kief with some others who had been most violent in opposing conciliatory measures, and carried them prisoners to Wilna. The king, and other dispassionate friends to peace, then interposed; and by their conciliatory speeches, so wrought up the dietines, that a plan of accommodation was at last adopted. A grand commission was now appointed to review the matters in debate; and a number of resolutions were accordingly passed, and sent to Moscow for Catharine's approbation. By these it was declared that the king should be of the Roman Catholic religion, but that the dissidents should enjoy the public exercise of their faith under certain restrictions, and be admitted to the senate, the diet, and to state-offices; and that a supreme tribunal, to consist of an equal number of members of each religion, should be appointed to decide on all matters of faith and public worship. Thus the dissidents gained their point; but it was by the influence of foreign bayonets, and the seizure of the Catholic bishops, whom neither policy, humanity, nor reason could move. Another diet was called, ratifying the acts of the commission, and the abolition of the jurisdiction of the pope's nuncio, and appointing a synod, in which the primate was to preside, as the dernier resort for deciding ecclesiastical causes; this measure greatly offended the papal court, and was strenuously opposed by the Roman Catholic partisans, but was carried by the presence of a Russian army, which *enforced unanimity*. The diet was then dissolved, as well as the confederacy of the dissidents, and apparent tranquillity restored to a country whose annals had, for more than a century, presented nothing but scenes of misery and deeds of rapine. But it was a deceitful calm, the flame was only smothered in order to break out with greater violence. Catholics and dissidents, though rancorous enemies of each other, on discovering that Russia had established an ascendency of force in their country, united in one common sentiment of detestation towards the enemy of their national independence; and in a few weeks after the dissolution of the diet, all Poland was in a state of insurrection, from the Ukraine to the Dwina. The great object of Catharine in favouring the dissidents, was the establishment of her own power in Poland; and the bigotry of the Catholics had furthered her designs, as it afforded a plausible pretext for her interference. Stanislaus was now viewed by his Catholic subjects with frantic detestation, as having made himself the instrument for establishing the tyranny of a foreign power, and a religious faith which Catholicism had taught them to hold in abhorrence.

Frederic, who was ever on the watch to improve every opportunity of aggrandizing his power, had attentively viewed the situation of Poland, and the progress of Russian influence; but instead of interposing in its behalf, and arresting its ruin, he determined to accelerate it by his intrigues with the courts of Vienna and Petersburg. Which of the three partitioning powers first conceived the villanous scheme, it is impossible with precision to say; for although they were all concerned in the business, yet none of them was willing to be thought its first projector. Yet it is generally believed, that the odium of the whole contrivance was due to Frederic, who suggested it first to Catharine by prince Henry, his brother, whom he sent on a secret mission to Petersburg, in 1770, when

the business is supposed to have been arranged, and communicated by Frederic to Joseph, at a second conference at Neustadt. Negotiations on the back of this interview, were held with Catharine through the medium of Frederic, by the Austrian cabinet; and the whole affair was carried on with such secresy, and their different shares so harmoniously adjusted, that it was known only by its gradual development. The Prussian and Austrian troops approached Poland, under various pretences, which the distracted state of the country easily afforded them; and each of them having seized his respective proportion of territory, the veil was thrown off, and their object revealed in a manifesto, declaring the principles on which they had acted relative to Poland since the death of Augustus, the last monarch, and representing the anarchy which then and since reigned, as having compelled them to adopt measures for securing the tranquillity of their own frontiers. This document insisted on the great expenses they were compelled to be at for this purpose; dwelt on the inconvenience of being exposed to the uncertain but possible consequences of the entire dissolution of Poland, and of having the mutual harmony and friendship of the three powers destroyed by such an event; and declared the immediate necessity which existed of applying a suitable remedy to evils, from which they had already experienced the most direful effects, and whose consequences, if not prevented, might prove fatal to the tranquillity of Europe. The only decisive remedy, therefore, which presented itself to the humane triumvirate to prevent the *entire dissolution* of Poland, was their asserting their respective claims to certain districts lying within the Polish boundaries. These claims were then produced, and the partitioning powers kindly admonished the Poles to banish all discord, and to unite with them in restoring peace to the republic. Circulars were despatched by Frederic, to the States of those districts which he had seized, giving plausible reasons for seizing them, and exhorting them to conform. A counter-manifesto was published by the Poles, who could not be brought so readily to believe their kind intentions in seizing part of their country. This was followed by a counter-manifesto on the part of the partitioning powers, still more insolent than the former, calling upon the Poles to summon a diet to ratify their claims. A diet was accordingly held at Warsaw, which was filled with the Austrian and Prussian troops to overawe its deliberations, and this assembly reluctantly ratified the unjust partition. An appeal indeed was made to the powers of Europe, and especially to Great Britain, Denmark, and Sweden, three of the guarantees of Oliva; but the three powers last mentioned, contented themselves with bare remonstrances. Gustavus was employed in establishing despotism in Sweden; Denmark was distracted by court-intrigues, and guided by a weak ministry; and the British administration were employed in squabbles with Wilkes, the city of London, and the refractory colonists. France too was sunk into a state of political degradation, under a weak and worthless monarch, Louis XV.; Turkey indeed, induced by the intrigues of France, took the part of the oppressed, but was nearly ruined in the attempt; and thus, as there never was a more flagrant violation of the rules of national justice and honour, and of the balancing system which had so long guided European politics, so a more favourable opportunity had never occurred in the annals of modern Europe, for the accomplishment of one of the most nefarious projects ever devised in the cabinets of statesmen, or recorded on the face of the historic page. Frederic obtained by this

partition in terms of the negotiation at St. Petersburg, of the 5th of August, 1772, the whole of Polish Prussia, and of Great Poland to the Netz, with the exception of Dantzic and Thorn; and from this time the kingdom of Prussia, has been divided into Eastern and Western Prussia.

Frederic kept a watchful eye on the motions of the emperor Joseph, with whom he had had two personal interviews, and declared himself against the occupation of a part of Bavaria by the Austrians, after the death of the elector Maximilian Joseph. The negociations with Austria having failed, Prussia in league with Saxony, began the war of the Bavarian succession in July, 1778, by entering Bohemia with two armies. The emperor Joseph kept himself in his fortified camp behind the Elbe at Jasomir, and would not venture a battle, but Catharine II. of Russia, having threatened to send 60,000 men to support Prussia, the peace of Teschen was concluded on the 13th of May, 1779, without any battle having been fought. In the evening of his active life, Frederic concluded with Saxony and Hanover, on the 13th of July, 1785, the league of the German princes against Joseph's plan to exchange Bavaria for the greatest part of the Austrian Netherlands. He died at Sanssouci, on the 17th of August, 1786, in the 75th year of his life, and the 47th of his reign, leaving to his nephew a kingdom enlarged by an augmentation of territory not less than 28,000 square miles, a full treasury, a well-disciplined army of 200,000 men, and a high political influence in Europe. Could warlike fame make a virtue of ambition, Frederic was certainly the most fortunate, as well as most illustrious prince of his age. His literary attainments, though not of the very first order, were yet much beyond those of ordinary men, or the common herd of kings. He was an eminent man, whether viewed as a philosopher, a soldier, or a king. Many a private man, indeed, might make a great king; but few kings have like Frederic made great private men. Unfortunately this greatness of mind was not accompanied with goodness of heart, it had nothing amiable in it. Frederic sported alike with human feelings, and with human life; he made no scruple of violating every law whether of justice or humanity, which stood in the way of his ambition. To the low vices which disgrace many elevated stations, Frederic was not addicted; for he was sober, chaste, and frugal; but in many instances his frugality bordered too closely on meanness to be an object of admiration. As to religion, he was totally destitute of any thing like it; and he made no profession of it, but jested with every thing that was solemn or serious. His unbounded toleration of religious opinions did not proceed from any religious principle, but from an equal indifference to all forms of religion. As he was a professed infidel, his chosen companions and his bosom-friends were most of the same stamp, as Voltaire, Maupertuis, Algarotti, D'Argens, and others. In the Seven years' war indeed, he was very popular in this country, and obtained the appellation of the glorious defender of the Protestant faith, for no other reason that we can see, but the mere circumstance of having the Catholic houses of Austria and Bourbon united against him. Considered as a sovereign, no absolute prince ever did more to advance the prosperity of his own dominions. He had sense and discernment to identify his own interest and those of his subjects; and considered himself as placed at the head of the state to defend its territories and promote its welfare. Upon the whole, notwithstanding his faults and his detestable ambition, candour obliges us to say, that Prussia lost in him an able, active, and enlightened sovereign;

and that he was the greatest prince of the house of Brandenburg, that ever swayed the sceptre. What does him the greatest honour is, that he was in the most noble sense of the word, a popular monarch,—the king of the people. He lived in the midst of his people; in almost every hut, his portrait was to be found; and the meanest of his subjects had free access to him. All his works were written in French, for which language he always entertained a strong predilection. This partiality may perhaps be accounted for by the fact, that the German language and literature, had not made sufficient advances in the time of his youth, to present his active mind with any subjects of leading interest. Among his numerous works, the *Anti-Machiavel*, shows by what training he prepared himself for the task of government.

Frederic William II.] His nephew Frederic William II. succeeded him in 1786, and reigned till 1797. It was only necessary for him to maintain the political position and strength which his uncle had given to the Prussian States; but Frederic William was destitute of his great predecessor's abilities, though not of his ambition. The French Revolution breaking out, he was the first to take the field against republican France. To this he was induced by the sanguine representations of the emigrant princes, who assured him that one campaign would decide the business. But he was soon cured of his mistake in the barren plains of Champagne, where more than a third of his army perished of hunger and disease, and the rest were compelled to make an inglorious retreat. Though he still carried on the war against France after this repulse, it was no longer as a principal, but as a mere subsidiary of Great Britain; and when at length he perceived that the war neither yielded laurels nor profit, he was the first to withdraw from the contest, and patched up a peace, on the best terms he could with a victorious enemy, losing his territories on the west of the Rhine. He perceived, moreover, that he had been made the dupe of the empress Catharine's policy, who had artfully encouraged the German powers to embark in the war against France, thus diverting their attention and their forces, whilst she was effecting her design of completely subjugating the Poles; and he determined, if possible, to compensate for his late reverses, by sharing with that princess the spoils of an oppressed people, whose protector he had declared himself.

Second Partition of Poland.] For several years after the first partition, Poland had enjoyed an interval of repose. But as soon as Catharine's attention was diverted from that country by the Turkish war, the king and the patriotic part of the nobility embraced the opportunity afforded by that circumstance, of adopting measures to free themselves from the yoke of Russian ascendency, and to recover that independence which their civil dissensions had ruined. Rightly attributing the misfortunes of their country to the defects of its government, and concluding, that to amend the constitution was the most effectual method of giving stability to the Polish councils, and consistency to Polish power, they determined to give the country a new form of government, calculated to make it happy at home, and respectable abroad. For this purpose, a constitution was prepared with the greatest secrecy and despatch, and measures were taken to ensure its acceptance.

Of this constitution, the following seem to have been the principal features: The Roman Catholic religion was to be the dominant national religion; but persons of all other religions were to enjoy freedom of conscience and the protection of government. The crown of Poland was

pronounced hereditary with regard to individuals, and elective with regard to families; and the house of Saxony was declared to be, at that time, the family to which the succession belonged. The executive department of government was delegated to the king and his council. The person of the sovereign was declared to be inviolable; and he had the right of pardoning all criminals, except such as were accused of crimes against the State. He had also the command of the forces; and the appointment of ministers, senators, bishops, and officers of every kind. The judiciary authority was committed to primary courts in each palatinate, or district; courts of appeal in each province; and several inferior courts. As in Poland there were only two orders of men known,—the nobles and the slaves, and as to the former only belonged all the active rights of citizens, it was provided, that this order should be as speedily augmented as possible. For this purpose, it was enacted, that every citizen might purchase a landed estate,—a privilege formerly denied them; and that whoever purchased a village or township paying a land-tax to the amount of 200 florins, should be ennobled; that thirty citizens should be ennobled at every diet; and that every office in the army, the law, and the church, should be open to every citizen so qualified. The condition of the slaves or vassals was also to be greatly meliorated. The legislative department of government was vested in a meeting called the diet. The members of the diet were to be chosen once in two years from the order of the nobles, and divided into two houses, one called the senate, the other the house of nuncios. The latter corresponded, in some degree, to the house of commons in Britain, and the house of representatives in America, and possessed by far the greater share of power; for although the senate might refuse its assent to a law which had passed the house of nuncios, yet if resumed at the next diet, and passed by the nuncios a second time, it was to become a law in spite of the opposition of the senate.

This constitution, which was confessedly borrowed from those of Britain and of the United States of America, with such alterations as fitted the peculiar condition of the country, was brought forward with great solemnity, on the 3d of May, 1791, and was ratified by a great majority. Unluckily for Poland, however, though the new constitution had been cordially received by the majority of the nation, it was not favoured by all of leading influence. Many of the old nobles saw with concern, that their order by being rendered still more numerous, would become less august in the eyes of the multitude than it had formerly been. The Polish ministers, in the mean time, allowed themselves to be amused by the crafty politics of the courts of Berlin and Petersburg. The most profound assurances of peace covered the most active preparations for war; and the Poles were surprised to hear, that, notwithstanding their pacific intentions, their territories had been invaded by a great Russian army.

The Poles had not foreseen this hostile step; they were, therefore, totally unprepared to meet it. But, however discontented several of the nobles might be with the new constitution, they were unanimous in their resolution to resist the unwarrantable interference of Russia. When the troops of Catharine approached, Poland had few soldiers, and fewer arms and necessaries; but the resentment of the people inspired a promptitude and vigour to which the nation had for some time been a stranger. Of the nobles, some carried their plate to the mint, and others

provided great quantities of arms and military stores. Of the common people, none seemed unwilling to join the standards of his country, and volunteers hurried together from every quarter. Resolution supplied the place of discipline; the Russians were attacked before they had proceeded far beyond the frontiers; and it soon became evident that the Poles were not to be vanquished so easily as had been imagined. But though the Poles had courage to attack the force which had been sent against them, and had gained several advantages, they were sensible that they could not hope ultimately to succeed, without the support of other powers by which the great resources of the empress might in some degree be counterbalanced. In this emergency, they turned their eyes towards Prussia, whose assistance, they imagined, they had every reason to expect. It had been stipulated by a treaty, ratified in April, 1790: "that the contracting parties should do all in their power to guarantee and preserve to each other reciprocally, the whole of the territories which they respectively possessed; and that in case of menace, or invasion, from any foreign power, they should assist each other with their whole force if necessary." It had been farther stipulated: "that if any foreign power whatever should presume to interfere in the internal affairs of Poland, his Prussian majesty should consider this as a case falling within the meaning of the alliance, and should assist the republic, according to the tenor of the former article." Such being the terms of the treaty, it was by no means surprising, that the Poles should now look with confidence for the promised aid. His Prussian majesty's interest, however, did not lead him to assist the Poles in the present emergency, and he therefore discovered, with much political sagacity, that the treaty alluded to was dated previous to the establishment of the new constitution which, he held, liberated him from all his former engagements. Finding that from Prussia no aid was to be expected, the Poles resolved to make a desperate effort for themselves. Several engagements were fought; but though in bravery the Poles were superior, in discipline and in numbers they were greatly inferior to their enemies. At length, perceiving that the contest must finally end in favour of the Czarina, the king was constrained to yield at discretion, and to annihilate that constitution, for the establishment of which he had done so much. This concession was highly resented by such of the Polish nobles as seriously desired the independence of their country, and Malachowski, Sapieha, and Radzivil, made the strongest protestations against it. The Russian empress, though she could not decently reject a submission made without any condition, would perhaps have been better pleased, had the Poles continued their resistance, and thus afforded her a pretext for making herself mistress of the country by right of conquest. It appeared, however, that though a plausible pretext for seizing the remaining Polish provinces was wanting, one might soon be framed. The courts of Vienna, Petersburg, and Berlin, resolved to divide the unfortunate kingdom of Poland among themselves; and measures being contrived for that purpose, the several powers proceeded to put them in execution with the utmost deliberation.

The king of Prussia was the first to renew hostilities. After having issued a manifesto declaring that the revolution had been effected without his consent, and contrary to his inclination, and that the tranquillity of his own territories required him to lead an armed force into Poland, for the purpose of suppressing opinions and motives to action which

were entirely subversive of the good order of society, in the beginning of 1793 his troops advanced against Thorn, which immediately fell into his hands. Dantzic lay convenient for his purposes, and had long been coveted; it was therefore next attacked. The Poles remonstrated, but their remonstrances were only answered by a grave assurance that his Prussian majesty had the good of Poland at heart. At length it was discovered that the good of Poland required the partition of the kingdom. The emperor of Germany published a manifesto, requiring the Poles to submit with equanimity to the approaching partition of their country; and the empress of Russia and king of Prussia soon followed with theirs, declaring their reasons for what they were about to do. The infamous declarations of the interposing monarchs were followed by proceedings equally infamous. The Poles were required to sign a treaty confirming the partition of their country; the diet appeared refractory, but the most obstinate members were seized and sent back to the provinces which they represented, while the other members were confined in the room where they had met to deliberate, and being surrounded by an armed force, were informed that none of them would be allowed to depart till the treaty of partition had been signed. In this situation, they united in the following solemn declaration:—

"Surrounded closely by foreign troops, on the second of this month, threatened with further invasion of the territory of the republic by the Prussian armies, to its uttermost ruin, and oppressed by innumerable violences, the States in diet assembled were forced to give leave to their deputation for signing the imposed treaty, with addition of a few clauses, and such only as the dictating power itself seemed in pity to approve of. But with grief and surprise, we find, by the sad experience of this day, that the court of Berlin is not satisfied therewith. We see fresh acts of violence forcing a new project upon us; and, in order to support it, the same preponderant power, not contented with investing the place of our deliberations by an armed foreign force, and addressing to us notes full of menaces, seizes from among us, and carries off our members, and, by an unexampled proceeding, keeps the king, bent under the weight of age, and under so manifold calamities, and us, the States of the republic, confined and imprisoned in the senate. Thus situated, we do declare in the most solemn manner, that, unable to prevent, even with the risk of our lives, the effects of the oppressive force, we leave to our posterity, happier perhaps than ourselves, those means of saving our dear country, whereof we are bereft at present; and thus the project sent to us by the Russian ambassador, though contrary to our laws, wishes, and opinions, forced by the above means to accept, we do accept. Done at Grodno the 24th of September. Signed and engrossed in the public records, according to law."

Third Partition of Poland.] In this manner, two-thirds of the Polish territories were for ever alienated, and it was not probable that the remaining third would be allowed to maintain its independence. A military order which had been instituted for the reward of such as had signalized themselves in the war against Russia, had been revived: this offended the empress, and, at her request, it was again abolished. A formal abrogation of the new constitution was next demanded, and this request also was instantly complied with. But all this did not satisfy the Russian empress, who next demanded that the number of the forces should be reduced to 16,000: with this demand government would like-

wise have complied, but several of the regiments, resenting the indignities to which their country was subjected, refused to disband, and put themselves under the command of Madalinski, a Polish nobleman. The empress immediately despatched 15,000 Russians into Poland, and, pretending that the king was endangered by the rebellion, requested his instant co-operation against Madalinski and the insurgents, and that every person suspected of being unfriendly to the measures which she prescribed, should be taken into custody. It is not surprising that this request met a refusal. It involved the fate of every Pole, since they all might reasonably be supposed to view the arbitrary proceedings of a foreign power with jealousy. Besides, the rapacious conduct of the Russian soldiers had highly irritated the minds of the people. Incited at length by such treatment to declare their sentiments, the council resolved neither to send an army against Madalinski, nor to arrest any nobleman who had not been legally convicted. This expression of a resolution to maintain the national dignity, excited the enthusiasm of the common people, who every where evinced the strongest desire of asserting their independence, and wanted only a leader for this purpose. This leader was soon found. Koscinsko, a Polish nobleman, possessed of considerable military skill, and of an undaunted mind, and who had signalized himself in the contest which the American colonies maintained against Britain, declared himself willing to conduct the armies of his country against the troops of their ambitious neighbours. At the head of a few Polish insurgents, he had already attacked the Russians with success, and entered Cracow on the night of the 24th of March, 1795. Here causing the gates to be shut, he declared himself the commander of all such Polish troops as were willing to maintain the independence of their country, and issued a proclamation inviting the nation to shake off that despicable lethargy which had been the great cause of the triumphs of their enemies. He imposed an oath of fidelity on such troops as were then under his command; and adopted measures for augmenting his army. The constitution, which, by the influence of Russia had just been abrogated, was solemnly recognized; and all his adherents bound themselves to support it by every possible exertion. The Polish ministry were, at this time, in a situation not a little critical. They resented the indignities offered to their country, but they dreaded the Russian power; and their measures were often almost contradictory, according as their resentment or dread prevailed. They passed a decree against the insurgents, declaring them rebels; and authorized the arrest of every suspected person; but when Ingelstrohm, a Russian general, demanded the surrender of the arsenal, they not only refused to comply, but informed Kosciusko of the demand, who instantly marched upon Warsaw with the few troops under his command. On the 4th of April, he met and defeated 6000 Russians advancing to the siege of Cracow; but was compelled by his loss in this engagement, to fall back upon that place. Relieved at this time of his apprehensions from Kosciusko, Ingelstrohm, on the 17th of April, renewed his demands for the surrender of the arsenal and the disarming of the troops, demanding also the immediate seizure and trial of twenty of the Polish nobles. The king and council ventured to remonstrate against this order; but the ambassador who carried their remonstrance to the Russians was treated with indignity; and the Russian general despatched general Bauer, with a detachment, to take possession of the arsenal by force. Bauer, upon

his approach, found that the arsenal had already been seized by the citizens, and that the arms had been taken out. The Russian detachment were made prisoners, and the citizens having now acquired arms, attacked the Russians, who, after a combat of thirty-six hours, in which the half of their number fell, with difficulty succeeded in gaining the open fields, and soon after effected a junction with a body of Prussian troops within two leagues of Warsaw. It was evident that no pacific measures could now be employed, and that it was necessary to make some vigorous exertion against the attack which was expected from Russia. According to the advice of Kosciusko, a national council was established at Warsaw, in place of the provisionary council which had for some time conducted the national affairs. Troops were collected from every hand with indefatigable diligence; and, in May, the Polish army amounted to upwards of 22,000 men, under the command of Kosciusko; 18,000 under Kochowski; 6000 under Jatinski; 12,000 stationed at Wilna; and 8000 stationed at Warsaw. The Russian empress now ordered 40,000 Russians to advance into Poland from the Ukraine, and 16,000 from Livonia. In several unimportant engagements the Poles were generally victorious. But Elsner, with a Prussian army, attacked Cracow; and Kosciusko, by the dread of placing himself between two hostile armies, being prevented from relieving it, it surrendered at discretion. On the 25th of June, the king of Prussia joined the Russian army; and the combined troops directed their march towards Warsaw, intending to take it by storm. Kosciusko, who had long by the celerity of his movements avoided the attack of the Prussians, now encountered the body of forces by which he was opposed, and forcing them to give way, threw himself into Warsaw. The siege was carried on with vigour, and the Prussians made themselves masters of several of the outworks. The resistance, however, was no less animated than the attack; and, at length, about the beginning of September, the king, perceiving that he was not supported by the troops of Russia, and alarmed by the insurrections which prevailed in those provinces which he had already acquired from Poland, retreated to Lublin. Considerable success attended the efforts of the insurgents in South Prussia: and in Lithuania they had hitherto afforded sufficient employment to the Russian forces; but on the 13th of September, Suvarof entered Poland with 20,000 men; and, engaging the Poles near Brzesc, defeated them with great loss. Kosciusko no sooner heard of this defeat, than he hastened to oppose Suvarof. Being informed, however, that Suvarof's army was about to be re-enforced by that under general Fersen, he left his main body, and advanced with 6000 men to attack the latter. On the 10th of October, the armies met, and after a severe engagement, in which the Poles were at first successful, Kosciusko's forces were defeated, and he himself made prisoner. Suvarof now advanced to the siege of Warsaw, and summoned the inhabitants to surrender. But, although the Poles were dispirited by their late defeat, and by the captivity of their favourite general, they declared their resolution to resist to the last,—a resolution which probably was not at all displeasing to that general, as it afforded him an opportunity of exercising that cruelty by which all his military operations were uniformly disgraced. On the 4th of November, his army received orders to attack the suburb of Praga. The command was to advance to the charge with the bayonet and sabre only; and the order was executed with a cool ferocity almost peculiar

to the Russians. The Poles made a noble resistance, but were at length driven from their works, and the city was soon after obliged to yield unconditionally. After this event, the Poles could no longer resist their enemies. The kingdom was divided among the successful powers; and thus the independent existence of Poland was terminated.

Towards the end of his life, Frederic became dissolute, and dissipated all his uncle's vast treasures. His career of pleasure and inglorious reign were terminated by a dropsy, the effect of his excesses, which produced his death on the 16th of November 1797. He was succeeded by his son, Frederic William III., the reigning sovereign, to whom he left a kingdom considerably enlarged by his share in the spoils of Poland, and by the two principalities of Anspach and Baireuth; but encumbered with a debt of 28,000,000 of crowns.

Frederic William III.] The new prince found himself in difficult circumstances on his accession to the throne; but the first act of his administration raised fair hopes in the hearts of his people; certain very illiberal and intolerant religious edicts were repealed, the liberty of the press was re-established, and the old system of economy reverted to. He obtained possession of the indemnity which had been agreed upon in a secret article in the peace of Basel, of 5th April, 1795, by which France guaranteed the bishopric of Munster, the principality of Hildesheim, and Paderborn, and several other districts in Westphalia and Lower Saxony, to the Prussian monarch, in return for the cession of his Rhenish provinces, and by which Prussia gained an increase of territory exceeding 3 700 square miles, with an increase of population not below 400,000. In the third coalition against France, between England, Russia, and Austria, in 1805, Frederic William endeavoured to remain neutral; but several circumstances, particularly the visit of the emperor Alexander to Berlin, operated a change in his opinion, and he was about to join the coalition, when the battle of Austerlitz put an end to his negotiation, and a treaty was concluded between France and Prussia, in which the latter, in consideration of the cession of Anspach, Cleve, and Neufchatel, was to take possession of Hanover, then occupied by the French, which drew forth a declaration of war from England against Prussia. The formation of the Rhenish confederation by Napoleon, gave occasion to new negotiations between France and Prussia, and suggested to the latter power the idea of forming a similar league in the north of Germany. This, and several other circumstances, upon which the limits of our present sketch do not permit us to enter, led to a war with France, which was decided almost as soon as begun by the battle of Jena, in consequence of which Napoleon occupied Berlin; and the Prussian fortresses, with a few honourable exceptions, surrendered without resistance. The king and his family hereupon retreated to Königsberg and were followed by the victorious enemy to Memel. In another attempt, with the aid of the Russians, to resist the French arms, the battle of Eylau remained undecided; but that of Friedland, in which the Russians were completely defeated, led to the peace of Tilsit, in which Frederic William—who actually had lost his whole kingdom, which almost, without the exception of a single village, was in the hands of the French—received the half of it back from Napoleon. After this misfortune, the king set himself with very creditable zeal to improve the internal condition of his remaining territories, and founded the university of Berlin on a very extensive plan. In 1810, Prussia concluded a new

alliance with Napoleon; and when the war between France and Russia broke out in June, 1812, the king of Prussia sent a corps of 30,000 men to join the French army. In the retreat of December, 1812, general York, commanding this corps, capitulated with the Russian general; and in March, 1813, the king of Prussia declared war against France by joining the Russians. Extraordinary efforts were made in this war by the whole Prussian nation, and every means were taken to inspire them with feelings which the government, when it had no longer need of such excitement, was afterwards the first to suppress. But we cannot enter here into details, which have indeed been partly given in our history of Germany, and will partly be told in the history of France. After the peace of Paris, Prussia, according to treaties previously concluded with Russia and Austria, was to be re-established on the *statu quo* of the year 1805; but Russia now demanded for itself the whole of Poland, for which Prussia required to be indemnified by the whole kingdom of Saxony. After long negotiations, Prussia obtained more than half of the Saxon territory, with a population of 845,000 souls, under the name of the duchy of Saxony. Those countries which she had lost in the peace of Tilsit, several circles of Western Prussia, which had been given to the grand duchy of Warsaw, the towns of Dantzic and Thorn, the Altmark, Magdeburg, Halberstadt, and several other towns with the surrounding districts, Cleve, Münster, and Wesel, were reunited with Prussia, who also received as new acquisitions the grand duchy of Posen, the grand duchy of Berg, Wiltzlar, Dortmund, Corvey, and considerable parts of the French departments on the left banks of the Rhine. Soon after the end of the congress of Vienna, Napoleon's return from Elba caused a new war, in which Prussia again took part, and contributed by her arms—after having suffered a severe defeat on the 16th of June at Ligny—to gain the decisive victory of Waterloo. At the second peace of Paris, Prussia obtained a farther accession of territory, by some parts of France near the Saar and the Mosel, and joined the holy alliance. A constitution founded upon the principle of a general national representation, has been promised by the king, but has not hitherto been granted.

CHAP. II.—PHYSICAL FEATURES—CANALS—AGRICULTURE—MANUFACTURES AND COMMERCE.

Physical Features.] The general physical features of a country comprehending so many districts of different appearance as the Prussian monarchy are difficult to be given; we shall therefore endeavour to point out only the most general outlines here, and reserve the particulars for the topographical description of the different provinces.

The eastern part of the monarchy forms an almost uninterrupted plain, interspersed only with a few hills, which do not rise to mountains. The southern edge is bounded by the Sudetes towards Silesia; and by the Thuringian forest towards Saxony; its south-western angle is bordered by the Harz. Some branches of these mountains run into Silesia; but the country flattens so much towards the Baltic, that a part of the streams form stagnant lakes in the interior, and the coast would be everywhere exposed to the encroachments of the sea, if the shore was not protected by means of alluvial deposits, and also by artificial dykes. Through the western half of the monarchy run several chains of hills,

partly the remains of the *Sylva Hercynia* of Tacitus, and partly branches of the Wasgau and the Ardennes. However, all the lands on the right side of the Rhine, to the north of the Lippe, belong to the sandy plains of the north of Germany; and beyond the Rhine, the extreme mountain point is the Eifel, at the northern foot of which the plain begins again. These plains give a very uniform appearance to both parts of the monarchy; but the finest part of the monarchy, and one of the finest districts in Germany, are the banks of the Rhine from Coblenz to Cologne. The declination of the eastern part is in the E. towards the Baltic; and in the W. towards the German Ocean; that of the western part is also towards the German Ocean. The coasts of Prussia are washed only by one sea,—the Baltic, which, along a line of coast exceeding 500 miles in length, forms only two large bays, the Tanzker Wyk, on the coast of Western Prussia, and the Rüge Bodden, between the peninsula of Mönkgath and the island of Usedom; but the three large *haffs*, which are properly only inland lakes, stand in immediate communication with the sea, and are therefore also sometimes called bays.

Lakes and Climate.] The Prussian States have an abundance of inland lakes. Eastern Prussia has about 300; Western Prussia about 100, and Brandenburg 679. The climate is on the whole temperate and healthy, although very much modified by the different situations of the provinces. The lands along the coast are cold, and sometimes damp and variable, whilst the inland provinces enjoy a very fine climate, which also causes a great difference in their productions.

Canals.] Among other obstructions to agriculture and commerce in the Prussian dominions, was the difficulty of conveying materials and merchandize to different parts of the interior. In order to remove these, and to facilitate trade, the great Frederic improved the navigation of several rivers, and caused several canals to be formed, of which we have the following account from Busching. The canal of Plauen shortens the water-passage between Berlin and Magdeburg about one half, and was finished under the direction of a French engineer, named Mahestre. It begins near Parie, on the Elbe; intersects the Elbe and Stremme, having three sluices in it, which check the fall of the water out of the Elbe into the Havel, which is 21 feet in height, and promotes its passage; after which it passes on by Plauen, into the Havel. This canal is 8,655 perches, or above 20 British miles in length; being 22 feet wide at the bottom, and 26 feet wide at the surface of the water, and in some places between 40 and 50 feet broad, with bridges laid over it at nine different places.—Another canal joins the Spree and the Oder. This was ordered to be cut by the great elector Frederic William, and was completed between the years 1662 and 1668. It issues out of the Spree into a lake near Muhlrose in the Middle Mark, and thence runs partly along the Schlübbe, partly through it, and into the Oder, being 13½ British miles in length; 5 Rheinland perches broad, and 6 feet deep.—Another canal joins the Havel and Oder, called the canal of Finow. It begins at Liebenwald, on the Havel; passes thence into the river Finow; and below Lower Finow, runs into the Oder. Frederic II. caused it to be completed between the years 1743 and 1746, and on it are thirteen sluices.—The Oder canal runs out of the Oder, from the village of Gustebiese, to the prefecturate of Nuenhagen, falling again, near Wutzo, or about four and a half British miles below Odersberg, into the Oder. This canal was opened in 1755.—Another canal, denominated the canal

of Bromberg, in Prussian Poland, joins the Vistula and Notez or Netze. This canal was ordered to be made by the great Frederic, when, by the first partition, he had obtained possession of Western Prussia, and part of Great Poland. It is 20 British miles in length; and by means of this junction, a person can sail up the Oder to its junction with the Warta at Kustrin; up the Warta till its junction with the Netze; up this river to the canal of Bromberg, and thence to the Vistula; and down this last river to Dantzic—an inland navigation of at least 500 British miles. If we include the canals joining the Elbe and Oder, it will add 200 British miles more to the extent of inland navigation.

State of Agriculture.] Before the year 1807, the landed estates in East Prussia, West Prussia, and Pomerania, were in the possession of large proprietors, and were worked, without the intervention of any tenantry, by a class of persons but little removed from the condition of slavery, who in many cases had a hereditary right to some use of the land: such as to grow one crop of corn according to a prescribed course, while the lord had the right of pasture between the crops. These peasants, who were originally attached to the soil, and who could not be removed at the pleasure of the proprietor, have been since converted into freemen and freeholders, and compensations given to them in land or money for their former claims upon the lord of the territory. This better order of things, however, has not yet produced all its natural effect on the agriculture of the country. With very few exceptions, all the land is still in the occupation of the proprietors, and such a thing as rent is nearly altogether unknown. The domains of the Crown, however, are differently circumstanced from other land, and are let to farmers; and, in as far as these, which constitute about one-sixth part of the whole province of West Prussia, are concerned, the rent, which is excessively ill paid, appears to average only about 1s. 3d. per acre. The value of estates accordingly is also very low, and of average arable land the highest price may be stated as somewhat less than 40s. and the lowest as not quite 15s. per acre. Even these moderate rates, however, refer only to the maritime provinces of Prussia; in the other parts of the kingdom, land is still greatly more depreciated. As to the stock of cattle in these countries, the number of horses does not seem to be ⅓d, nor that of cows and sheep ¼th of what would be required in England for the same extent of land; and it is to this deficiency in the sources of manure that the wretched condition of agriculture is in a great measure to be attributed. The land in cultivation, indeed, is in such a state of poverty that much of it would not yield, on an average, more than 3 times the seed put into it. The general course of cultivation is to fallow every third year, by ploughing three times when designed for rye, or five times if intended for wheat, and allowing the land to rest without any crop during the year, from one autumn to the next. Of late years the proportion of rye to wheat has been rapidly increasing. Rye is fast becoming a favourite, even with the higher ranks, both in Germany and Poland, and wheat, even where it can be grown, is now deemed the least profitable of the two crops by many of the farmers. Barley and oats are sown in the spring which follows the harvesting the wheat and rye, and these complete the course, which is again followed by a whole year's fallow. Even on the best managed properties, the quantity of wheat sown was very insignificant. One nobleman, who farmed his estate of 26,000 acres, of which 2-3ds was tillage, and the rest woodland, Mr. Jacob reports,

grew but a few acres of wheat, and of late had sold no corn of any kind. On this estate there is a flock of 15,000 Merino sheep, yielding on an average 2½ pounds of fine wool, the annual sales of which amount to one half more than the value of the carcases. Instead of selling, the proprietor finds it more profitable to buy corn. On the same estate there were about 1000 acres planted with potatoes, the chief part of which were used in the distillery, which seems an indispensable adjunct to every well-managed farm. Sugar and treacle are made from potatoes, as well as ardent spirits. In the mean time, in spite of the disposition to increase pasturage, few of the proprietors have any capital to buy either sheep or other stock, the most of the returns from the estate going to pay the interest of the money that has been borrowed on it. Formerly the majority of the estates were nearly inalienable; but the necessity of the case has lately compelled the government to allow to the holders the power of sale. Nearly all the land in the country is in fact encumbered with mortgages,—the sums borrowed being, in many cases, greatly beyond the present value of the property. The new proprietors, who have been raised to that condition by the abolition of the ancient feudal tenures, generally contrive, when tolerably industrious, to procure, by their own labour, potatoes and a little bread-corn, as well as provisions for their two oxen. They all grow a small patch of flax, and some keep five or six sheep. The flax and wool supply the clothing of the family; the fat of the sheep, soap and candles. Meat of any kind they can rarely afford; and seldom a cow to supply them with milk. Among the day-labourers, the rate of wages averages about 5d. a day; and they are understood, upon the whole, to be better off than the above-mentioned freehold proprietors. The poor, who were formerly supported by the several feudal lords, are now maintained by certain local funds; but no regular assessment has as yet been introduced. Private charity is still the principal source on which they depend. In general the soil is so light that it may be easily ploughed with two oxen. The ploughs are ill-constructed, with very little iron in them. The harrows are made of wood, without any iron. The waggons are mere planks, laid on the frame loose. The harness of the cattle is formed of ropes, without leather. The use of the roller is scarcely known, the clods being broken by the hand with wooden mallets. The value of live stock is very low; the best Merino sheep selling at 6s. or 6s. 8d. per head, and cows from 30s. to 65s. The price of hay varies from 14s. to 20s. per ton. The whole taxes in Prussia amount to about 10s. per head, which, however—the value of money being double what it is with us—is here considered a very oppressive burthen. Of these taxes, the *grund steuer*, or land-tax alone, falls wholly on the land. It averages in the three maritime provinces somewhat less than 3d. per acre. The military service is extremely onerous, as every young man is compelled to serve three years, from the age of 20 to 25 as a soldier. The working class of the inhabitants live very wretchedly, in houses of mud, warmed by close stoves, but forming no protection from the inclemency of the weather. There is not above a thirtieth part of the whole class who can be considered as better off. Much of their misery results from the inability of the proprietors to dispose of their surplus produce in consequence of the English corn laws.

Manufactures.] Mr. Jacob states, that the parts of Prussia through which his route lay have scarcely any manufactures:—but if in passing through the provinces on the Rhine, he had left the high road and pene-

trated into the neighbourhood of Elberfeld, Barmen, Solingen, Aix-la-Chapelle, Glaybach, and Rheidt; or if in passing through Silesia and Saxony, he had visited the districts of Zittaw, Chemnitz, Gorlitz, &c. he would probably have been struck by the progress of manufactures in these quarters, essentially aided as it has been by the great cheapness of provisions which has followed the peace, and the want of export for their surplus production of grain. Not only are most of the raw productions of the country manufactured in it, but some foreign materials are also consumed; and although Prussia, taken as a whole, cannot be considered as a manufacturing country, yet the government has always done much to encourage and advance the national industry, and it is only to be regretted that this wish should have led to the mistaken policy of adopting compulsory measures, and imposing restraints upon free commerce by heavy excises and customs. Prussia, by the acquisition of the Rhenish provinces, obtained several branches of manufactures, which it did not before possess. The principal articles of Prussian manufacture, are linen, woollen ware, iron, cotton, silk, leather, copper, tobacco, and china. The manufacture of china in Berlin, is considered as the finest in Europe, and is particularly distinguished by elegant forms and fine painting. The trades people are generally formed into corporations.

Commerce and Monies.] The advantageous situation of Prussia between the manufacturing districts of the west of Europe, and those of the north and east, the extent of its navigable coast, and the number of navigable rivers and canals, seem to have destined it for a very extensive commerce. The commerce is really important as regards its own productions, but the maritime commerce of Prussia is by no means so extensive as it might be made, in consequence of the fetters which the severe custom-house system imposes upon it. Prussia might command almost the whole commerce of Germany, if she would lower her customs; but as it is, the interior commerce is by far the most important, and much has been done by government to facilitate the intercourse between all parts of the monarchy, although there are still some districts in which the roads are in a very bad state. Berlin may be considered as the centre of interior commerce, and next to it Breslaw. A great part of the transport is carried on by the navigable rivers and canals. On the Oder alone there are more than 1,400 larger or smaller vessels; on the Vistula there are above 800; on the Elbe about 400; only 16 on the Weser, and more than 300 on the Rhine, without counting the smaller boats. The commerce with Russia and Austria exhibits a balance against Prussia; with part of Poland and Saxony, the contrary is the case; and with the rest of the German States it stands almost equal. With France the balance is in favour of Prussia; and with the Netherlands it is much against it. The maritime commerce is carried on with Russia, Sweden, Denmark, Great Britain, the Netherlands, Spain, and North America. The articles of exportation are corn, yarn, linen, woollen ware, manufactured iron, timber, carpenters' work, fuel, amber, Prussian blue, Eau de Cologne, Dantzic liquors, wines, hams, smoked geese, Westphalian pumpernickel, starch, and refined sugar. The articles of importation are raw sugar, French and Hungarian wines, cotton, silk, brandy, colonial ware, spices, oil, horses, cattle, gold, and all kinds of silk and haberdashery ware. The administrations of the different provinces have also the inspection of the commerce. The bank of Berlin has counting-houses in the important provincial towns; in

several towns there are agency offices; an insurance office exists in Berlin; and commercial relations with the different European States are maintained by reciprocal consuls. Prussia possesses a paper circulation, but not in sufficient proportion to the metallic currency; for the utmost of the sum afloat in promissory notes is about 5,500,000 crowns; while the mass of coined money may be reckoned at 30,000,000 of crowns. All money is coined at the three mints of Berlin, Breslaw, and Dusseldorf, but the coins vary in different provinces. Bankers' accounts are kept both in imaginary and silver groschen. The gute grosche—an imaginary coin—is estimated at three English halfpence; the silver grosche at five farthings. The thaler is equal to about 3s. British currency. The Frederic d'or, stamped as being equal to 5 thalers, is now equal to 5¾.

CHAP. III.—INHABITANTS—RELIGION—STATE OF EDUCATION —GOVERNMENT—REVENUE—MILITARY FORCE.

Inhabitants.] THE mass of the inhabitants of Prussia consists of Germans, who form more than $\frac{17}{21}$ of the whole, and with the exception of the province of Posen, are everywhere the preponderant race. They are partly of the Lower, and partly of the Upper German race, and are also distinguished by their different dialects. The Walloons, who live in the neighbourhood of the Ardennes, and in some of the other provinces as colonists, speak a patois of mixed French and German. The inhabitants of Slavonian descent amount to about 1,600,000, and are subdivided into Lithuanians, Wendes, Sorabes, and Kassubes, Lettes and Cures, and Tscheches or Bohemians. In the district of Sarlouis, and in the Mark Brandenburg and Pomerania, are a good many inhabitants of French descent, who, although mixed with the Germans, have preserved their native language; and in the centre of Pomerania, small villages are found, where most of the inhabitants understand and speak French. Their number may amount to about 12,000. There are nearly 150,000 Jews in the kingdom, four-fifths of whom reside in the duchy of Posen. Except in the newly-acquired provinces in Poland, Saxony, and on the Rhine, where the government is very far from being liked, the Prussians everywhere exhibit a great attachment to their king and constitution. According to Dr. Casper of Berlin, who has published a pamphlet on the subject, there were in 1824 no less than 5,590 medical men in Prussia, or one for every 2000 of the population. But what is much more extraordinary, there were no less than 10,307 midwives! The rate of mortality varies in the provinces from one in 40½ to one in 35¾.

Ecclesiastical Affairs.] With respect to religion, by an estimate made shortly after the treaty of Vienna, the Protestants, to whom belong the Lutherans, and members of the Reformed creed, who are now united in most of the Prussian provinces, the Moravians, Hussites, and several other sects, amounted in the whole to about 6,500,000. Of these, the Lutherans are by far the most numerous; the members of the Reformed church amounted to about 350,000, and the Moravians and Hussites to about 600,000. The Catholics amounted to about 4,500,000, and the Jews by a census taken in 1824, amounted to 149,594. Although the population has increased since, it may be safely presumed, that

the principal sects still exist in nearly the same proportions. There is no established religion in the Prussian States; the professors of all creeds enjoy equal rights, and are equally eligible to every civil dignity. The Lutheran church has two bishops in Berlin and Königsberg; the rest of the clergy are divided into general superintendents, deacons, ministers, and curates. The clergy of every diocese form a synod under the presidency of the superintendent, which watches over church-discipline, and the religious instruction of the schools. These synods stand under a provincial synod, which meets twice a-year, and reports upon church affairs to the consistorium, and through it to the ministry. Every fifth year, a general synod meets in Berlin. Every province has a consistorium, and a board of education. The Moravians have a bishop at Niesky; but are, like the Gichtelianians and Socinians, under the Lutheran consistorium; the Catholic clergy consists of archbishops, bishops, deacons, and curates. The churches and the inferior clergy owe obedience to the archepiscopalian and episcopalian consistoriums; but the rights of the sovereign, *circa sacra,* are watched over by a councillor, who has a place in the Protestant consistoriums. The Catholics are allowed to appeal to the Roman See in affairs of religion and conscience; but all despatches sent there must first be laid before the bishop, or his vicar-general, who delivers them to the ministry for church-affairs, to be forwarded to Rome. An exception is made in affairs of conscience, and matters appertaining to the *forum poenitentiale.* The numerous convents and nunneries formerly existing in Silesia, and other Prussian provinces, have been secularized, with a few exceptions; the Jews have schools and synagogues, rabbies and teachers.

State of Education.] The literature of Prussia has already been comprehended in our general sketch of German literature. The great exertions which the Prussian government has made for the advancement of literature and science are acknowledged in all Germany; and Berlin may fairly be considered as one of the principal points from which the light of civilization and knowledge radiates over Germany,—and honour which the liberty of the press, introduced by the great Frederic, mainly contributed to win for this country; and although this liberty has been somewhat restricted by his weaker successors, a very considerable degree of it still exists. In no country certainly has government done more, or perhaps as much, for public instruction as in Prussia; it employs 2½ per cent. of its revenue in public education, while France allows for the same important purpose no more than ¼ per cent.; the direction of it stands under the ministry for church-affairs. There are six universities in Prussia; viz. Berlin, with 4 faculties; Breslaw, with 5; Greifswalde, with 4; Halle, with 4; Königsberg, with 4; and Bonn, with 5. The gymnasiums, or preparatory schools for the universities, are divided into from 3 to 6 classes, and have from 4 to 12 teachers. The city schools, divided into high and ordinary schools, serve as preparatory schools for the gymnasiums; village and parochial schools are found in almost every village; but in some districts beyond the Rhine, in Westphalia, where the farms are quite isolated, and in Posen, the children are sometimes obliged to walk several miles to school.[5]

[5] Prussia has given birth to many illustrious characters, whose names stand high in the roll of fame. The immortal Leibnitz, the father of German philosophy, was a native of Prussia; Cluverius, an eminent antiquarian and geographer, was a native of Dantzic; Nicholas Copernicus, the restorer of astronomy, was born at Thorn; Regiomontanus, a celebrated mathematician, was a native of Königsberg; and Ema

Government.] Prussia is still an absolute monarchy. Although in 1815 a solemn promise was given by the king to grant a constitution the only step yet taken is the convocation of the Landstande, who have, however, quite as little power of legislation or control as their brethren in Austria. The succession is hereditary in the male and female line. The monarch is of age at 18. There is no fundamental law for the kingdom, excepting the act of confederacy for the German States, and some particular treaties for different provinces. The first order of the Prussian monarchy is that of the Black Eagle, founded by Frederic I. in 1701.

Administration.] The king is at the head of the administration; he directs the whole machine; he is the supreme lawgiver, and the first judge and bishop. The chancellor of state acts as prime minister, under the immediate command of the king. The council of state is the highest consultative authority in the kingdom; the king is president of this council, and the princes of the royal family become members of it at 18 years of age; the field-marshals and ministers are also members. In this council, proposals for new laws are discussed, and regulations for the administration enacted. The ministry consists of different departments independent of one another, and each responsible to the king only. It is divided into the department of foreign affairs; the treasury and exchequer; the department of justice; the department for church and school-affairs; the commercial department; the department of home-affairs; that of police; the war department; and the department for finance. Each of the provinces are divided into districts, and at the head of the administration of each province stands a president; each different circle or district has a provincial councillor at the head of the administration. In each circle is a physician and a surgeon for the exercise of medical police. The towns have magistrates. The general code of laws for the monarchy is that promulgated in 1794, which is about to be introduced, though with some modification, into the Rhenish provinces also, where hitherto the French code has existed.[6]

Revenue.] In the days of the great elector Frederic William, the revenues of the house of Brandenburg were estimated at £750,000 ster-

nuel Kant, lately a mighty name, was a native of, and professor of philosophy, at the same place; Opitz, the father of German poetry, was a native of Silesia, and emphatically called the Swan of Bober; Christian Wolff, once a gigantic name, and who in his day was lord of the philosophical ascendant, was also a native of Silesia, and professor of mathematics at Halle; Christian Garve, whose elegant translations and judicious criticisms have proved so serviceable to the reputation of our British moralists upon the Continent, also owed his birth to a Prussian province; Klaproth, the celebrated mineralogist and explorer of the Caucasian Alps, and the two Humboldts, William and Alexander, the first minister for foreign affairs to his Prussian majesty, and the second the most illustrious of travellers, and whose unrivalled labours have done more service to the science of geography, in the opinion of our own journalists, than those of all preceding travellers, and Von Busch, who explored the Alps of Norway, are also Prussian natives. We must also mention the names of the elder and the younger Jablonski, of Königsberg, the latter of whom explored the recesses of Coptic literature; Mendelsohn, the Jew; Nicolai, the celebrated Berlin journalist; the pious and learned Franck, of Halle; and those colossuses of literature, Jenich, Adelung, and Vater. These names, and many more which might be added, are certainly sufficient to redeem the Prussian nation from the foul aspersions which political writers, in the plenitude of their zeal for France, and their own ignorance of the subject of German literature, have thrown upon the *betes d'Allemands*.

[6] A recent number of the *Bulletin des Sciences* publishes the following list of crimes in Prussia in 1824: viz. fire-raising, 261; robberies, 135; thefts, with personal violence, 1,013; common thefts, 8,297; parricides, 3; murders of wives by their husbands, or husbands by their wives, 7; infanticides, 75; murders, with robbery, 5; other murders, 48; homicides, 46; suicides, no less than 928! This statement does not include the crimes in the Rhenish provinces.

ling. Before the second, and after the first partition of Poland, the revenue was 23,000,000 dollars, or £4,025,000 sterling. After the second and third partitions of Poland, the revenue in 1800, was estimated at more than £5,000,000 sterling. By Hoeck, in his appendix, published in 1804, when Prussia was farther extended by the indemnities of 1803, the revenue was estimated at 36,000,000 rixdollars, which at 3*s.* 6*d.* each, would amount to £6,300,000 sterling; and by Hasselt, who wrote at a still later period, and quotes Hoeck, and many other writers on the subject, it was computed at 40,000,000 rixdollars, or £7,000,000 sterling. To pretend to state precisely the present amount of the Prussian revenue would be presumptuous, as we have no documents upon the subject; at all events it must be much greater now than in 1805. The provinces acquired by the treaty of Vienna, and the second treaty of Paris, must yield a much greater revenue than those parts of the duchy of Warsaw which were given up to the emperor Alexander, as they are equally fertile, and far more populous. It is certain also that the taxes must have been greatly augmented to pay the interest of the national debt, created by the surprising efforts which Prussia made in 1813 and 1814, to throw off the yoke of France. If, therefore, we take into consideration the above-mentioned circumstances requiring an augmentation of taxes, and the addition of territory, the revenue cannot we imagine fall short of Balbi's estimation of it in 1826, viz. 215,000,000 francs, or nearly £9,000,000 sterling.

A national debt is quite a new thing in the annals of the Prussian monarchy. Previous to the battle of Jena and its disastrous consequences, her revenue exceeded her expenditure, and she had no State-debt. But the enormous contributions levied by Bonaparte in 1807, amounting to 300,000,000 livres, or £12,500,000,—the maintenance of a French army of 150,000 men, who lived for 18 months after the peace of Tilsit, at discretion upon the inhabitants,—the havock made by the passage of French armies to the Russian war,—the advance of 94,000,000 livres, or very nearly £4,000,000 sterling, made by the Prussian monarch in 1812, and which was never paid, besides other contributions and requisitions too tedious to enumerate, along with the total annihilation of all commerce, concurred to weigh down this country. Even in 1807, about the time of the battle of Eylau, the Prussian monarch was obliged to supply his imperial brother of Russia with the last remnant of the funds of the bank of Berlin which had been carried off on the approach of Bonaparte. We need not be surprised, after all this, that a national debt has been created in Prussia: the credit of the administration, however, is so good, that the public funds have never fallen below 85 per cent. Balbi estimates the total debt in 1826, at 726,680,000 francs, or £30,278,333 6*s.* 8*d.*, estimating the franc at 10*d.*

Military Force.] Prussia being a kingdom but of comparatively modern date, her strength as a military State was not apparent till the era of the great Frederic. The foundation of her warlike power was laid by Frederic William I., the immediate ancestor of Frederic II. He it was who first established in his dominions the system of conscription. In 1783, the whole military force of Prussia amounted to 296,666 infantry, and 42,496 cavalry. In 1806, the army amounted to 234,000 infantry, and 34,000 cavalry. In the campaign of 1813 and 1814, Prussia sent 200,000 warriors from her wasted territories to the field, exclusive of the *landwehr*, or militia, and *landsturm*, or reserve; and

in 1815, 250,000 Prussians entered France. The Prussian army is now divided into, 1st, troops of the line, which form the permanent army; 2d, landwehr; 3d, landsturm. The troops of the line are raised partly by conscription, to which every young man from 20 to 25 is subjected, and partly by volunteers. The landwehr assembles yearly for exercise; and the first division of the landwehr, including all young men, if thought necessary, from 20 to 25 who are not in the line, and also a part of those from 26 to 30, in the event of war, goes into the field with the troops of the line. The second division, including, if necessary all the men above 30 and under 40 able to bear arms, remains in garrison in time of war. The landsturm are only employed for the maintenance of civil order and domestic security.

The standing army consists of—

Troops of the guards,	18,220
Infantry of the line,	112,140
Cavalry,	19,232
Artillery and Engineers,	15,408
Total,	165,000 men;

Among whom are 3,036 officers.

The landwehr, or militia, amount to—

Troops of the guards,	3,204
Infantry,	142,900
Cavalry,	13,900
Total,	160,004 men.

The principal military reward is advancement; but from a captaincy upwards, the king has reserved to himself the right of nomination, without reference to the time of service. The punishment of flogging has been entirely abolished in the Prussian service.

CHAP. IV.—TOPOGRAPHY.

THE Prussian dominions out of Germany are divided into three provinces, which follow in order the German provinces, which have already been described.

I. THE PROVINCE OF EASTERN PRUSSIA.

This province is bounded on the N.E. and E. by Russia; on the S. by Poland; on the W. by Western Prussia; and on the N.W. by the Baltic. Its surface, according to Hoffmann, amounts to 702.80; and according to Stein, to 703 German, or 15,115 British square miles.

Physical Features.] Eastern Prussia is an immense plain, having only a few hills in the S.W. The country is so flat towards the sea, that the coast would everywhere be exposed to inundations, if the downs of sand did not protect it. The want of fall causes most of the rivers near the sea to run into stagnant lakes. The soil is of various qualities, however; about two-thirds are a rich mould; the remaining third is sandy. The highest hills do not exceed 506 feet above the level of the sea.

Lakes and Forests.] On the southern angle of ancient Prussian

Lithuania, no less than 200 lakes are found within a radius of 420 British miles. The chief of these are the *Spirding*, which, with its numerous creeks, extends 20 British miles in every direction; the Mauer, and the Lerantin. In addition to these inland lakes, the rivers Vistula and Niemen present singular inland sheets of water at their mouths or estuaries, called in the German language *haffs*; that of the Vistula being called the *Frische haff*; and that of the Memel, or Niemen, the *Curische haff*. The Frische haff is 70 miles in length, and from 3 to 12 miles in breadth, being separated from the Baltic by a narrow tongue of fand, called in German *Nerrung*, said to have been cast up by the tempests and waves about the year 1190. This haff, anciently denominated the *Sinus Venedicus*, communicates with the Baltic, near Pillau, by a strait called the Gatt, an English mile in breadth, and 12 feet deep; but the Frische haff is not so deep as the river Pregel, so that no ships of burden can sail upon it. The Curische haff, or *Sinus Curonicus*, is a much larger expanse of water than the former, being 55 British miles in length, and from 6 to 35 miles in breadth. This inland bay is full of dangerous shelves and sand-banks, and the coast on either side is inhabited by fishermen. It communicates with the sea at Memel, by a narrow opening of a mile broad, and 19 feet deep. The narrow slip of land which separates the Curische haff from the Baltic, called *Curische Nerrung*, runs in a parallel line with this haff, and is not above 2½ miles broad; and in some places not a mile in breadth. The north part only of this haff belongs to Eastern Prussia.

The forests which cover Eastern and Western Prussia are of immense extent. In general, it is computed that in Eastern Prussia there are 4,821 acres of wood to every German square mile, or nearly a third of the whole superficies.

Rivers.] The principal rivers of Eastern Prussia are the Memel, with its two arms the Russ and the Gilge, and its tributary rivers the Scheschuppe and the Jur, the Tange, the Pregel, with the Alla and Deine, and the Passarge. The Memel, or Niemen, rises in the Palatinate of Minsk; and not far from its source receives the stream of the Berezina, famous in the disastrous retreat of Napoleon, for having absorbed in its cold and icy bosom so many thousands of hapless victims. Proceeding further in a N.W. course, it receives at Kowno the Vilia, and afterwards discharges itself into the Curische haff by several mouths. Its comparative course is upwards of 400 British miles.—The Pregel originates in a number of small lakes in the S.E. quarter of Eastern Prussia. Being joined by the Inster below Insterburg, it proceeds due W.; and after receiving the large stream of the Alla near Wehlau, it discharges itself into the Frische haff below Königsberg.—The Passarge rises in a number of small lakes, and after a course of 80 miles, discharges itself into the Frische haff, below Braunsberg.

Climate.] The climate is healthy, though cold, changeable, and damp, as the country is everywhere exposed to the winds. The neighbourhood of the sea diminishes the cold.

Productions.] The productions of Eastern Prussia are horses,[7] cattle,

[7] There were formerly several royal studs in Eastern Prussia; but since the marshes of Stallupalmen were drained, they were all collected into that quarter, which is by no means favourable to them, as the soil is very humid. This district of royal studs, or breeding-district, called the Stuttman, of which Trackehmen is the chief place, is an establishment perhaps unequalled in Europe, both for its extent and magnificence; but it would be much more beneficial to the cultivators, if it were divided into so many sections over the whole extent of the country.

sheep, goats, swine, game—among which, on the heath of Kaporasch, the elk is still found—fowls, seals, fish, bees, corn, vegetables, fruit, flax, hemp, tobacco, and wood. In Eastern Prussia, though the climate is more rigorous, the soil is more uniformly fertile than that of Western Prussia. Potatoes are cultivated to as great an extent as in Ireland, and serve as the principal food to the greatest part of the inhabitants; and in the forests they gather the *kermes* here called the Russian cochineal. Eastern Prussia is the only country in Europe which produces in abundance that curious substance called amber; of the origin of which naturalists are yet ignorant, and still uncertain whether it is to be ranked amongst vegetable, mineral, or marine productions.[8] The quantity of amber found in Prussia is estimated by Hoeck at 200 tons annually; and as it is a royal commodity, the sovereign derives from it a revenue of £5000 sterling per annum. The line of coast whence the amber is generally taken is eight leagues in extent—from Pillau to a little beyond Polangen. It is chiefly thrown upon the beach by the strong north and north-easterly gales; and sometimes they find it in the small hillocks and sand-hills, near the sea, in regular strata, which they work as they would do a mine. It is also found in the interior of the country; but the pieces are very small, and the quantity trifling. As an article of commerce, amber is divided into five classes: pieces of three ounces weight are sold separately; the rest is sold by the ton, and forms an object of export trade from Memel and Königsberg. The price varies from 20 to 234 rixdollars the ton.

[8] Kirwan is decidedly of opinion that it is of vegetable origin, but mineralized by some unknown operation of nature, similar to that by which animal flesh is converted into a substance resembling spermaceti. It bore an immense price with the ancients, and was valued far above gold or precious stones. By them it was believed to be the gum of a tree, and hence it obtained the appellation of *succinum;* and in the poetic fancy of Ovid was feigned to be the tears of the Heliades deploring the fate of their brother, the unhappy Phæthon. As by friction it becomes electric, it also obtained from the ancients the appellation of *helektron* and *electrum;* and has imparted its Greek name to the modern philosophy and doctrines of electricity. The Phenicians were the first who penetrated into the seas of the North, and discovered this substance, as we are informed by Herodotus, who says that these early navigators brought tin from the Cassiterides, or Isles of Scilly and peninsula of Cornwall, and amber from the Eridanus, which empties itself into the North Sea,—which, in the judgment of his learned annotator, Larcher, could not possibly be any other than the *Rho-dauni,* a tributary stream of the Vistula, and the *Eridanus* of Ovid, which received into its bosom the unhappy Phæthon in his fall, as amber is at present found in large quantities alongst its banks. In the times of Pliny and Tacitus, the Estians, who inhabited the maritime coast now called Prussia, carried the amber as far as the shores of the Rhine. From them it received the appellation *glaes,* which in Gothic denotes a glassy and shining substance, exactly analogous to the Greek *helektron.* Tacitus has given a very curious account of it, and how it was gathered by the Estians. An embassy was sent by the emperor Nero to the king of the Estians, in order to buy it upon the spot. The embassy took its route from Carnuntum on the Danube, near the site of the modern Vienna; and crossing the Hercynian forest, arrived at the Vistula; and embarking on that river where it first begins to be navigable, sailed down the stream, till they arrived at the Amber Islands at its mouth, now the Delta of the Vistula, and met with a kind reception from the prince and his subjects. They bought and brought away about 13,000 lbs. of this commodity, amongst which there was one piece which weighed 13 lbs. We learn from Cassiodorus, that Theodoric, king of the Italian Ostrogoths, received a large parcel of it by way of present from the Estians, who were desirous of his friendship, which he in return promised by a letter of thanks to them for the valuable gift. Amber is not now held in such estimation; yet still several little trinkets are made of it, besides scented powders, an acid spirit, and a fine oil which is used for varnish. The Danes and Italians import the amber generally in a rough state, and profit by the workmanship. The produce of their industry in this way is chiefly disposed of in Turkey, the oil and the spirits excepted.

Inhabitants.] The population in 1817 was 919,580 inhabitants; it is now estimated by Stein at 1,005,000. The primitive inhabitants of Eastern Prussia were Sklavonians, branched out into Lithuanians, Poles, and Lettes, who were in the middle ages partly exterminated, and partly blended with the Germans, who now form the principal part of the nation. The Lithuanian language is spoken only in the district of Gumbinnen, and a few other places.

Military Force.] Eastern and Western Prussia form together one military division, which recruits four regiments of infantry, one battalion of light cavalry, one regiment of cuirassiers, and one of dragoons.

Topography.] This province, which contains 67 towns, 11 boroughs, and 7,276 villages, is divided into the two districts of Königsberg and Gumbinnen.

City of Königsberg.] This city is the capital of Eastern Prussia, and is situated on the Pregel, over which are seven bridges. It owes its origin to Ottocar, king of Bohemia, who coming to the assistance of the Teutonic knights against the pagan Samlanders, a castle was first built by his advice in 1152; and afterwards a town, named Königsberg, in honour of this prince. But in 1265, it was rebuilt in another situation; and in 1280, obtained all the privileges of a free town. It is a large and beautiful city; and the rampart with which it was surrounded in 1626 is seven miles in circumference. The number of private houses is 4,290; and the number of inhabitants is 64,000, according to Stein. It properly contains three towns: the Altstadt, built in 1264; the Loebenicht, founded in 1300; and the Kneiphof in 1324, on an island formed by the river. The three towns were united in 1721. Königsberg has a university, founded in 1544 by the Markgraaf Albert; and 17 Lutheran churches. The cathedral, built in 1332, is a large structure, and has an organ containing 5000 pipes. The palace, which is a magnificent building in the form of a parallelogram, 136 paces long and 75 broad, has a hall 274 feet in length, and 59 in breadth, unsupported by pillars; and a handsome library. The tower of the citadel is very high, having an ascent of 284 steps to arrive at the top, whence there is an extensive prospect. The exchange and town-house are very fine edifices; in the latter of which, the magistrates of the three towns meet every day. Though surrounded with a rampart, and defended by a citadel, this city never stood a siege, but always submitted to a victorious or invading army. It has always made a considerable figure as a commercial city, and was in former days a member of the Hanseatic league. Here, in 1701, Frederic I. crowned himself with his own hands; and here Frederic II. in 1740 received the homage of the inhabitants. It lies 84 miles E. of Dantzic, and 24 miles from the shore of the Baltic. Lat. 54° 42′ N., and Long. 20° 48′ E. of Greenwich.—Memel, at the mouth of the Curische haff, where the Dauge runs into the Baltic, is a strongly-fortified place, with 8,220 inhabitants.—Harber, with a lighthouse, 73 feet high, conducts an animated commerce.—Pillau is built on a neck of land, which unites the Frische haff with the Baltic. It has a harbour, and is protected by a fort. The population exceeds 3700. As no ships drawing more than seven feet water can pass the bar at the mouth of the Pregel,—large vessels anchor here.—Friedland on the Celle, with 1,706 inhabitants, is celebrated for the victory of Napoleon over the Russians and Prussians, on the 14th January, 1807.—Eilau, with

1,524 inhabitants, was the scene of a battle between the Russians, Prussians, and French, on the 7th and 8th of February, 1807.—Braunsberg on the Passarge, contains 5,786 inhabitants.

The Circle of Gumbinnen.] This circle was formed from a part of Lithuania. The chief town is Gumbinnen, established in 1732, and now containing 6,057 inhabitants.—Tilsit on the Memel, a town of 11,947 inhabitants, is celebrated as the place where the treaty of peace between France, Russia, and Prussia was signed, in July, 1807.

II. THE PROVINCE OF WESTERN PRUSSIA.

This province is bounded on the N. by the Baltic; on the E. by East Prussia; on the E. and S. by Poland; on the S.W. by Brandenburg; and on the W. by Pomerania. Hofmann estimates the surface at 465.9, and Stein at 454 German, or 9,761 British square miles.

Physical Features.] The surface is almost level. The coast is quite flat, but protected by the shallowness of the sea, and by the Nehrung. The soil along the banks of the rivers, particularly along the Vistula, is very rich and fertile; but one-third consists of sand and morasses. The Baltic forms on the W. a bay called the *Putziger Wyk*, bordered on the coast side by a sand-bank. The Vistula, of which one arm falls directly into the sea, and the other passes through the Frische haff,—of which the western part belongs to Western Prussia,—is the principal river. Among the other rivers, the most remarkable are, the Drewenz, the Sorge, the Motlau, the Braa, and the Schwarzwasser, or Black Water. There are a number of inland lakes, but none of the size of those of Eastern Prussia. The climate and productions are nearly the same as those of Eastern Prussia. Flights of locusts occasionally appear here, and lay waste the crops.

State of Trade.] This province was very much neglected under the Polish government, and though it has been greatly improved under the Prussian, much still remains to be done to bring it to a level with many of the German provinces. Agriculture is carried on in some parts in an improved manner, and the province produces much more corn than supplies its own consumption. The situation of the province is very advantageous for commerce, having on the N. the sea,—in the interior a large navigable stream,—and on the S. an easy communication with the canal of Bromberg.

Inhabitants.] The population in 1817 was 581,971; in 1826, it amounted, according to Stein, to 634,000. The majority are of Slavonish, or rather Polish descent, and Polish is almost everywhere spoken. But at least one-third of the population is now German, and the German language is likely soon to supersede the Polish altogether. There are 300,000 Protestants in this district, and about 270,000 Catholics, which creed includes almost all the Poles.

Military Force.] Western Prussia recruits four regiments of the line, one of hussars, and two of uhlans.

Topography.] Western Prussia is divided into two districts: Dantzic and Marienwerder.

City of Dantzic.] Dantzig, Dantzic, or Danzig, in Latin *Gedanum*, by the natives called *Gdansk*, and by the Poles *Dansk*, is a populous, commercial, and fortified city, with large suburbs, the capital of Western Prussia, and the see of a bishop. It is situated at the con-

fluence of the Radaune and Motlau with the Vistula or Weichsel, four British miles from the coast of the Baltic; and is the great granary of the North. It consists, properly speaking, of three cities; namely, the Altstadt, or Old Town, which was an inconsiderable village in 997, but had risen to a borough defended by a castle in 1294; the Vor Stadt, or Fore Town, built in 1311, and fortified in 1344; and the Recht Stadt, or emperor's city, built in 1390 by Conrad Wallenrod, master of the Teutonic order. All these three towns, constituting the modern Dantzic, are encompassed with a high wall, so broad that coaches easily go round it; but it is commanded by two heights on the S.W. The houses are partly of brick, and partly of stone, being generally six or seven stories high. The public edifices are magnificent. The cathedral of Dantzic is the stateliest fabric in all Prussia, having 48 altars, and 3,722 windows. The font was made at Antwerp, and cost 24,000 rixdollars. The granaries of Dantzic are generally seven, and some of them nine stories high; having each of them a funnel to let the grain run down from one floor to another, to save the expense of labour and carriage. They are surrounded with water, so that ships lie close to them to take in their lading; and no houses are suffered to be built near them, for fear of fire. This city is the emporium of all the trade of Poland, being the grand depot for Polish produce, and the great avenue by means of which Poland is supplied with foreign commodities. Dantzic was for a long time the only port from which shipments were made to foreign countries of the wheat sent down by the Vistula; and although of late years exportation has also taken place to a considerable extent from Elbing, Riga, and Memel, that city still enjoys by far the more important portion of the trade. The grain warehouses are upon an excellent plan, situated upon an island, formed by the river Motlau on one side, and another branch on the other. There are three bridges on each side of the island, which are drawn up at night, excepting the two at the end of the main street across the centre of the island, communicating between the old city and the Vor Stadt. To guard these warehouses, there are from twenty to thirty large ferocious dogs let loose at eleven o'clock at night. To keep the dogs within these districts, as well as the passengers from harm, at the end of each of the streets leading to the main one are large high gates run across; no light is allowed, nor any person suffered to live on this island. The dogs prowl about the whole night, and create great terror. These warehouses are well-adapted for storing corn, and are capable of containing 500,000 quarters of wheat, although at present about 280,000 quarters only are found to occupy nearly the whole of them that are in repair. From its advantageous situation for commerce, Dantzic speedily rose to wealth and importance. From its various masters, the Danes, the Teutonic knights, and the Poles, it received successive accessions of commercial privileges; and, until by the partition of Poland it passed into the hands of Prussia, it was only nominally subject to Poland: being governed in its civil affairs solely by its own magistrates, whose jurisdiction extended to a space of 40 miles round the city. It continued to be subject to its Teutonic masters till 1454, when it shook off their yoke, and submitted with certain limitations to Casimir, king of Poland.[9] At the Reformation,

[9] It was one of the Hanseatic towns; and the Poles, its nominal masters, have more than once endeavoured to reduce it into complete subjection. The Scots, in consideration of the eminent service they did to this city, against the Poles, under the conduct of one of the Douglas family, were declared freemen of the city, and vested

it declared for the Augsburg confession, to which it has ever since adhered. The city, after a long siege, was taken by the French in May, 1807. The destruction of buildings and magazines during the siege amounted, according to the French bulletin, to 21,000,000 francs, or £825,000 sterling; and its losses were at least equal during the long siege of 1813. Its population in 1826 was 54,000, according to Balbi. The plain stretching out from Dantzic is traversed by the Vistula, which, for about 20 miles, is confined by banks above 20 feet of perpendicular height, and a mile asunder. The river is about one quarter of a mile in breadth. Dantzic lies in Lat. 54° 21′ N., Long. 18° 38′ E. of Greenwich: 84 miles W. of Konigsberg; 382 road-miles E. of Hamburg: and 280 road-miles S.W. of Riga in Livonia. Near Dantzic, between the Weichsel and the Motlau, spreads the *Danziger Werder*,—a very rich and fertile district.—Oliva borough has a celebrated monastery, founded in 1178, and was the place where the treaty of peace between Sweden and Poland was concluded in 1660. Marienburg, on the Nogat, is a town of 5496 inhabitants.

Circle of Marienwerder.] The chief town of the circle, Marienwerder, on the right banks of the Nogat, contains 4,895 inhabitants. It was from 1309 to 1525 the seat of the grand masters of the Teutonic order, the ruins of whose castle yet present a magnificent specimen of Gothic architecture. The *Marienburger Werder*, a district between the Vistula and Nogat, is of unparalleled fertility. Many peasants draw from 600 to 1000 crowns annually from their orchards.—Elbing, on the river of the same name, contains 18,534 inhabitants, and conducts a very important commerce, particularly with Poland.—Graudenz is a town of 6,700 inhabitants.—At a little distance from the town of Graudenz, on the Vistula, is the strong fortress of Graudenz.—Thorn, on the right banks of the Vistula, contains 10,000 inhabitants. The great astronomer Nicolaus Copernicus was born here in 1513.

III. THE PROVINCE OF POSEN.

This province, once a part of Poland, was united by different partitions to Prussia. It is bounded on the N. by West Prussia; on the E. by the kingdom of Poland; on the S. by the province of Silesia; and on the W. by the province of Brandenburg. Stein and Hofmann estimate its surface at 538.5 German, or 11,568 British square miles.

Physical Features.] Posen is a complete plain, except on the boundaries of Silesia, where some small hills rise. The Vistula touches this province only in one district, and receives no other river but the navigable Brahe; but the communication with the canal of Bromberg is advantageous for the province. The second river is the Warthe. which receives the Proszna and the Obra; and the third is the Netze, which was made navigable by Frederic II. who also formed the canal of Bromberg. There are many lakes here, among which the Gopplo is the largest; but they are not so numerous as in the other two Prussian provinces.

Climate.] The air is pure and healthy; the severest cold of winter never exceeds 26° 5′, and the greatest summer-heat 90° [illegible] of Fahrenheit.

with civic privileges beyond other foreigners; one of the suburbs is still called Scotland, in remembrance of Douglas' valour in defending the city, and was mostly inhabited by Scots. The arms of Scotland were also set over the gate whence Douglas and his countrymen sallied out upon the Polish army, and continued there till the gate, being ruined, was rebuilt.

The soil is partly very rich and partly sandy. Agriculture is still carried on in a very primitive manner.

Trade, &c.] The first weavers of broad cloth came here from Silesia under Wladislas IV. on account of religious persecution, and formed several towns, in which considerable manufactures of cloth still exist. Linen is another staple production. Posen is favourably situated for commerce on account of the two navigable rivers, the Vistula and the Warthe or Warte.

Inhabitants.] Stein estimates the population at 884,000. The stock of the nation are Poles; but there are many strangers, particularly Germans, whose number is probably above 140,000. The majority are Catholics. The Jews are very numerous; some statements say 120,000; but we are inclined to think this number exaggerated. The establishments for education are much behind all the other Prussian provinces, and the parochial schools are still much neglected. The poverty, ignorance, and drunkenness of the peasants is quite proverbial. Posen and Silesia form one military division.

Topography.] The province is divided into the two districts of Posen and Bromberg. In the first lies Posen, the capital of the province on the Warthe, with 25,000 inhabitants.—Fraustadt, with 6,251 inhabitants, has some manufactures and commerce. In the circle of Bromberg, the chief town is Bromberg on the Brahe, with 6,028 inhabitants.—Gnesen is the seat of an archbishop, who was formerly *Primas regni Poloniæ.*—Zarnikow on the Netze, with 2.250 inhabitants, has some manufactures.

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END OF VOLUME FIRST.